The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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MR JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negociated in Stocks and Shares not having a general market value.

Every Friday a general and reliable List issued (a copy of which will be forwarded regularly on application), containing closing prices of the week.

MINES INSPECTED.

BANKERS: CITY BANK, LONDON—SOUTH CORNWALL BANK, ST. AUSTELL.

SPECIAL DEALINGS in the following, or part:—

25 Assheton, 22s.	20 Eberhardt, £3 3s. 9d.	30 Panulcillo, £4 11s. 3d.
25 Almada, 7s.	50 Flagstaff, 23s. 9d.	100 Pestarena.
30 Canada Gold.	30 Glyn United.	100 Parys Corporat., 17s
35 Clementina.	20 Herodsfoot, £2¾.	20 Richmond, £9¼.
20 Colorado, 36s.	100 Javali, 8s.	25 South Darren, £3.
25 Devon Consols, £4⅛.	100 Killifreth, 12s.	20 Tankerville, £5 18s 9d
20 East Caradon, £3.	25 Leadhills, £3 17s. 6d.	10 Van, £21¾.
10 East Lovell, £2⅝.	10 Mineral Corporation.	50 West Assheton, £2 3 9
20 East Van, £2⅝.	20 Morfa Du, 15s.	20 West Chiverton, £4¼.
50 East Roman Gravels.	50 Pandora, 14s.	20 Wheal Crebor, £6½.

SPECIAL BUSINESS in all TIN Shares.

*** SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

RAILWAYS—SPECIAL BUSINESS.
FOREIGN BONDS—SPECIAL BUSINESS.

Fortnightly accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.
ESTABLISHED 1842.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
44, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES and MISCELLANEOUS SHARES of every description.
RAILWAYS, BANKS, FOREIGN and COLONIAL BONDS.
TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS.

Accounts opened for the Fortnightly Settlement
A Stock and Share List free on application.

MR. BUMPUS has SPECIAL BUSINESS in the undermentioned:—

25 Assheton.	40 East Crebor, 25s.	50 North Penstruthal,16s
50 Blue Tent, £2.	50 East Roman Gravels.	40 Panulcillo, £4 11s. 3d.
75 Bodidris.	15 East Chiverton.	25 Pateley Bridge, 15s.
3 Carn Brea, £54¼.	5 East Pool, £20½.	50 Parys Copper, 17s.
50 Canada Gold.	25 Frontino, £2 13s. 9d.	100 Pestarena, 7s. 6d.
35 Colorado, 36s. 6d.	150 Flagstaff.	50 Pandora, 12s.
100 Chontoles, 9s. 6d.	30 Gunnislake, £23½.	25 Penhalls, 37s. 6d.
5 Cape Copper, £31⅞.	5 Great Laxey, £18¾.	30 Ruby, £3⅜.
50 Clementina.	20 Great Holway.	25 Richmond, £9¼.
25 Derwent, £2⅞.	15 Herodsfoot, £2½.	20 Roman Grav., £11¾.
25 Drakewalls.	50 Hingston, 11s. 6d.	25 South Darren, £3.
2 Dolcoath, £54.	100 Javali.	50 South Crebor.
100 Don Pedro, 15s. 6d.	150 Killifreth, 12s. 6d.	10 South Frances, £11 8 9
20 Devon Consols, £4 8 9	25 Leadhills, £3 19s. 6d.	75 Tamar Silver-Lead.
15 East Lovell, £2 10s 6d.	15 Mellanear, £4½.	15 Tankerville, £5¾.
25 East Caradon, £2 19s 6	30 Marke Valley, 26s. 6d.	20 West Chiverton, £3⅞
30 Eberhardt, £3 8s. 9d.	10 Minera.	10 Wheal Peevor, £17.
20 East Van, £2⅝.	100 Nouveau Monde.	35 Wheal Grenville, £5¼
	25 New Quebrada, £3 11 3	

IMPORTANT TO INVESTORS.

Large profits may be realised by the purchase of SHARES in SOUND well-selected MINES at present prices. Many of these are likely to advance considerably in market value during the next few months.

MR. BUMPUS devotes special attention to these Securities, and is in a position to afford reliable information and advice to intending investors and others.

The following Mines are particularly recommended:—Wheal Peevor, Wheal Grenville, Wheal Jane, West Peevor, Wheal Kitty, Drakewalls, East Lovell, Killifreth, East Caradon, Gunnislake (Clitters), Marke Valley, Derwent, East Chiverton, South Darren, Great Holway, West Assheton, and Panulcillo.

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BANKERS: THE NATIONAL PROVINCIAL BANK OF ENGLAND, E.C.

FERDINAND R. KIRK, 5, BIRCHIN LANE
LONDON, E.C.

FORTNIGHTLY ACCOUNTS opened, on receipt of the usual "cover," in Railways Home and Foreign, Mining Shares, Foreign Bonds, and certain Miscellaneous Securities.

"THE WEEK."—A SEPARATE EDITION from that which appears in the *Mining Journal* is published every Wednesday evening, containing "Notes and Hints on the Stock Markets," with Closing Prices. May be had on application.

BANKERS: LONDON AND WESTMINSTER, Lothbury.

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Have Agents in England, Scotland, Wales, and on the Continent.

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ESTABLISHED 20 YEARS.

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ALL BUSINESS TRANSACTED FREE OF ANY CHARGE FOR COMMISSION.
Notice to Investors and Speculators.

MR. BUDGE has SPECIAL DEALINGS in—

50 Blue Hills.	110 East Crebor.	50 Marke Valley, 29s.
65 Bedford United, 8s. 6d	5 East Pool, £21.	130 North D'Eresby, 20s.
200 Bodidris.	10 Frongoch, £3¾.	30 New Cook's Kit., £7¾
2 Botallack, £56.	70 Flagstaff, £1¾.	50 Penhalls.
75 Chapel House.	60 Gray's Brewery.	200 Pestarena, 8s. 6d.
10 Cook's Kitchen, £4.	75 Glasgow Caradon, 30s.	75 Parys Copper, 17s. 6d.
3 D'Eresby Mountain.	20 Grogwinion, £4¼.	60 Ruby.
50 Devonport and Tiverton Brewery.	40 Gunnislake Clitters.	100 South Crebor.
	50 Herodsfoot.	45 South Darren, £2 19s 6
40 Devon Gt. Cons., 4¾.	100 Hingston Down, 15s.	100 Tamar Silver-ld, 27s 6d
3 Dolcoath, £55.	80 Ladywell, 10s.	35 West Assheton.
40 East Caradon, £3½.	25 Llanrwst, 15s.	5 Wheal Crebor.

BUYERS or SELLERS of any of the above, or holders of any Stocks or Shares not readily marketable, will do well to apply to MR. BUDGE.

NOTICE OF REMOVAL.

MR. PETER WATSON'S OFFICES will in future be at—
18, AUSTIN FRIARS,
OLD BROAD STREET,
LONDON, E.C.,
Being larger and much more convenient Offices than at—
54, OLD BROAD STEEET.

MESSRS. PETER WATSON AND CO.'S BRITISH AND FOREIGN MONTHLY MINING NEWS STOCK AND SHARE INVESTMENT NOTES — MINES. MINERALS, AND METAL MARKETS — SHARE LIST, No. 812, VOL. XV., for NOVEMBER month, will be published on WEDNESDAY next, and sent to customers on application.

Annual Subscription..... 5s. | Single Copy..... 6d.

MESSRS. PETER WATSON AND CO.,
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IMPORTANT INFORMATION REGARDING THE ABOVE.

BUYER and SELLER of SHARES at the close Market Price of the day.

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MR. ALFRED E. COOKE,
DEALER at NET PRICES in EVERY DESCRIPTION of STOCKS and SHARES,
76, OLD BROAD STREET, LONDON.
ESTABLISHED 1853.

SPECIAL.—ALL SHARES selected and recommended by Mr. COOKE have risen CONSIDERABLY in PRICE. INVESTORS can now be supplied with SHARES DIRECT on application, which will almost certainly realise 100 to 200 per cent. profit in a very short time.

IMPORTANT.—Investors following Mr. COOKE'S advice have made LARGE SUMS of MONEY. LOW PRICED LEAD SHARES should NOW be PURCHASED. Lead will probably advance many pounds per ton. There is no cheaper LEAD SHARE to be bought than
NORTH D'ERESBY MOUNTAIN, at 20s. fully paid.

Mr. COOKE has recently visited the Mine, and NEVER SAW IT LOOKING SO VALUABLE. Specimens from the workings can be seen at his offices.

NOTE.—The EXPENSES of any independent inspector will be REFUNDED should his report not agree with those favourable reports already made by eminent authorities.
ALL BUSINESS transacted FREE of commission.
SPECIAL BUSINESS in ALL TIN, COPPER, and LEAD SHARES at CLOSEST POSSIBLE PRICES.
STOCK EXCHANGE BUSINESS DONE ON BEST TERMS.

ALFRED E. COOKE,
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(Adjoining the Stock Exchange and Mining Markets.)

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ESTABLISHED 1848.

SPECIAL BUSINESS in the following:—

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Cardiff and Swansea.	Hultafall.	Tankerville.
Colorado.	Leadhills.	Van.
Chontales.	Last Chance.	West Assheton.
Devon Consols.	Marke Valley.	West Chiverton.
Don Pedro.	Nouveau Monde.	West Wheal Frances.
East Chiverton Consols.	North Penstruthal.	West Peevor.
East Lovell.	Pestarena.	West Pately.
East Van.	Pateley Bridge.	Wheal Jane.
East Caradon.	Roman Gravels.	Wheal Peevor.
East Crebor.	Richmond.	Wheal Grenville.
Flagstaff.	Ruby.	Wheal Uny.
Grogwinion.	South Darren.	

BANKERS: LONDON AND WESTMINSTER.

MR. CHARLES THOMAS,
MINING AGENT, STOCK AND SHARE DEALER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MR. ALFRED THOMAS,
MINING AGENT, AND STOCK AND SHARE DEALER,
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"HOW TO TAKE ADVANTAGE OF THE COMING RISE IN PRICES,"
By ALFRED THOMAS, 10, Coleman-street, E.C.
Will be forwarded to Investors upon application.

ALFRED THOMAS is a BUYER of the following SHARES:—

10 Lisburne.	200 Chapel House Colliery	100 East Caradon.
20 Roman Gravels.	20 Great Laxey.	40 Gorsedd and Merllyn
100 Leadhills.	100 Assheton.	15 Van.
	50 West Assheton.	

Sellers will please state lowest prices.

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LONDON MINE AGENT, ACCOUNTANT, AND AUDITOR.

MR. JOHN L. M. FRASER,
(Fourteen Years at the Great Minera Mines)
CONSULTING MINING ENGINEER—SECRETARY AND AUDITOR—ROYALTY AND MINERAL ESTATE AGENT—SHARE DEALER—MINES, MINERALS, AND MACHINERY BROKER—
GREENFIELD HOUSE, WREXHAM.

IMPORTANT TO CAPITALISTS.

The lessees of a valuable property, in the most highly mineralised district in Wales, requires an advance of £10,000 for further development and erection of machinery. Full particulars on application.

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SAFE DIVIDEND INVESTMENTS PAYING 4 TO 6 AND 10 PER CENT. PER ANNUM ON PRESENT OUTLAY,

SHARP'S INVESTMENT CIRCULAR
The NOVEMBER EDITION (post free),
SHOULD BE CONSULTED BY INVESTORS AND SHAREHOLDERS.

It is a Reliable "Guide," giving valuable information and Sound Advice, &c.
It gives Market prices; Dividends upon outlay, when payable; Reports, &c., &c.
IT CONTAINS ALL THE SAFE INVESTMENTS IN THE FOLLOWING:—

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Indian, American Stocks.	British, Foreign, Colonial Mines.
Bank, Financial Shares	Tea, Land Shares.
Tramway, Telegraph Shares.	Shipping, Dock Shares.
Municipal Bonds.	Miscellaneous Shares, &c., &c.

HENRY GOULD SHARP, STOCK AND SHARE BROKER,
42, POULTRY, LONDON, E.C.—ESTABLISHED 1852.
BANKERS: LONDON AND WESTMINSTER, Lothbury, London, E.C.

TO INVESTORS—SPECIALLY ADVISED—CHEAP SHARES.
Well worth Buying for a Rise of 100 to 200 per cent. Dividends next year.

I advise my readers to secure 500 Shares, or any less number, without delay. In last week's Edition I advised them at £2 10s. to £2 15s. They have since been done on the Stock Exchange at £3 2s. 6d. and £3 5s. Shares are cheap at £5 each, and well worth it. At £3 (9000 shares) it is only £27,000 for the whole property.

The profit for October and November amounts to about £750 on 50 tons per month, including the copper. A dividend will be paid in January next.

SOUTH DARREN (SILVER-LEAD) MINE, LIMITED,
CARDIGANSHIRE, WALES,
In 9000 Shares of £1 10s. each. Fully paid. Price £3 to £3 2s. 6d. per share.
No further liability.

This valuable and profitable Silver-Lead Mine is situate in the rich mineral district of Cardiganshire (a district which has proved immensely profitable, and in which hundreds of thousands of pounds have been paid in dividends). It is provided with the most efficient machinery for carrying on the operations.

A large new water-wheel has been erected, together with an auxiliary steam-engine for use during dry or frosty weather. The drawing, crushing, and dressing machinery have all been put in a substantial state on the newest and most economical principles, so that the mine is now in a position to make increased and continuous returns of lead ore, and with the present price for lead dividends will shortly be commenced, and shares rise considerably in value. They are well worth buying for dividends next year, and a rise of 100 per cent. in value during 1880.

MONTHLY RETURNS OF LEAD.—The present returns are 50 tons of ore per month, which will realise £16 per ton, thus proving the lead is of rich quality for silver, but these sales will soon be considerably increased, and, with advanced prices for lead, will greatly augment their profits, and enable them to pay good dividends.

N.B.—The 50 tons lead ore sold October 31, 1879, to Messrs. Sheldon, Bush, and Co., at £16 12s. 6d. per ton, realised £831 5s., giving a profit of 357*l.* on the month. They have 50 tons of ore for sale to-day, which, with copper, will give a profit of £350 to £400 for November.

RESERVES OF LEAD ORE.—The present value of the reserves of silver-lead ore (exclusive of tribute pitches) is estimated at 1000 tons, which will soon be largely increased by the driving of the 110 fm. level about to be commenced... £25,600

Lead ore is still low in price. The lead sold from this mine has realised £22 per ton, and will no doubt do so again.

In October 50 tons of lead ore were sold, and Mr. Walter Eddy, M.E., states that there is no difficulty in returning 60 tons per month, which (at £16 per ton) would give for three months £2880

Add copper ore	250	=	£3130
Cost for three months	£1500		
Dues at 1-20th	150		
Sundries (say)	100	...	1750
Minimum profit per quarter			£1380
Or for year in present state of mine			£5,520

This would be about 20 per cent. taking shares at £3 each. The returns will be increased, and with a further rise in lead and copper—which will take place—much larger profits will be made. Shares are well worth £5 at present time.

The agent states, Oct. 18, 1879: "I estimate the reserves in the mine at 1600 tons lead ore. This at £16 per ton would realise an amount of £25,600. The mine never looked better than at present, and the future prospects are most encouraging." See Report, page 1172, in this day's Edition.

TO INVESTORS—SPECIALLY RECOMMENDED.

HENRY GOULD SHARP advises the purchase of Herodsfoot Shares for a rise of 100 to 200 per cent. during 1880, excluding dividends. Shares are very cheap, a safe investment at present price, and certain to rise in value.

HERODSFOOT (SILVER-LEAD) MINE,
LISKEARD, CORNWALL.
In 3000 Shares. Selling price, £2 15s. to £2 17s. 6d. per Share.

This is a valuable mine, and continues to improve. It has been one of the richest and best dividend-paying lead mines in Cornwall, and is still very productive, as reports and sales of lead prove. The mine, upon an outlay of £3704, paid in dividends £79,508, and shares rose as high as £44, when the company was in 1024 shares. It is in full working order. Shares can now be obtained at £2 15s. to £2 17s. 6d. They will rise 100 to 200 per cent. They have over £10,000 worth of reserves of lead in sight, most important points to open up, and a rich lode to cut in the 215 fathom level. They are sinking the shaft from the 205 to the 215 fathom level on the course of the lode; this is a most important point, and will open up a large extent of Lead Ore ground. In the 205 fathom level they had a run of 85 fathoms of rich ore ground. This they will have in the 215 fathom level. The mine is looking well. No one can go wrong in buying at present price. Dividends will no doubt be resumed next year.

They sold 100 tons of lead ore for the past three months, and but for the new jiggers, &c., which have been put up, 120 tons would have been sold for the quarter. Investors may rely upon making money here. They will soon raise 40 to 50 tons per month, which will increase gradually. Shares are scarce and well held. If any of my readers could secure 500 shares and hold them for a year—only 3000 shares. At £2 15s. per share it is only £8250 for the whole property (now working at a profit), an absurd amount.

Shares are honestly worth £10 each, taking into consideration the intrinsic value of the property. At £10 each it would only be £30,000 for the mine. It is one of the cheapest mining investments in the country, and I advise the purchase without any hesitation at £2 15s. to £2 17s. 6d. per share. They have sold £2826 17s. 4d. worth of lead since April last.

The following are the sales of lead since April, 1879:—

Date of Sale.	Number of tons.	Price per ton.	Total amounts.
1879—April 28 ..... Tons	33 2 0	£14 2 0	£537 2 10
,, ...	15 7 3	10 18 0	166 7 4
June 19	26 3 3	12 18 0	337 14 0
,, ...	19 4 1	4 7 6	84 0 2
August 6	30 0 0	13 5 6	398 5 0
,, ...	16 0 0	7 8 6	118 16 0
,, ...	7 0 0	5 16 0	40 12 0
October 1	30 0 0	14 5 6	428 5 0
,, ...	20 0 0	5 9 6	109 10 0
November	30 0 0	16 2 6	483 15 0
,, ...	20 0 0	6 2 6	122 10 0

If my readers will compare prices they will find the best ore sold in November brought £16 2s. 6d. per ton—an advance of 37s. per ton on the October sale.

The agent states: He quite expects to sell the coming "six" months as much lead ore as during the past "nine" months, this with the increased price of lead will put the mine into a dividend state.

HENRY GOULD SHARP, STOCK AND SHARE BROKER,
42, POULTRY, LONDON, E.C.—ESTABLISHED 1852.
BANKERS: LONDON AND WESTMINSTER, Lothbury, London, E.C.

WEST CHIVERTON MINE.—FOR SALE, 30 SHARES, for CASH, at £3 15s. per share.

HENRY GOULD SHARP, STOCK AND SHARE BROKER,
42, POULTRY, LONDON, E.C.—ESTABLISHED 1852.
BANKERS: LONDON AND WESTMINSTER, Lothbury, London, E.C.

Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES *—No. CXXXVI.

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,
Mining Engineer, Wakefield.
(Formerly Student at the Royal Bergakademie, Clausthal.)
[The Author reserves the right of reproduction.]

METHODS OF WORKING WITH CT ATTLE PACKING.

PILLAR WORKING.

At the Forminy Colliery, Loire district, a seam of coal 6 to 7 yards in thickness is got in stages by the method we have called strike pillar working. The seam, which has a tendency to spontaneous combustion, dips at an angle of 30°. The seam is opened out in pannels 100 yards square, by means of levels driven 100 yards apart, and brows driven 100 yards apart, on the full dip or rise. These roads, which are driven in the lower part of the seam, are made 2 yards in height. At a distance of 15 yards from the level the first stall in the pannel is driven on both sides of the jig-brow, and carried to within 12 yards of the adjoining jig-brows, this 12 yards being left as a safety pillar. The stalls are now set regularly apart (14 yards centre to centre), and since the stalls are driven 2 yards wide by 2 yards high, the pillars are left 12 yards thick. By arranging the workings in pannels each compartment can be completely isolated from the rest of the mine, by blocking up the two ends of the jig-brow by which the compartment is served, and thus the danger and loss from fire confined to that compartment. When the first and second stalls have reached the boundary the first pillar is worked out backwards towards the jig-brow, in 12-yard pieces, the actual working proceeding from the lower to the upper level. The excavated space is filled with attle packing, &c., brought especially from other portions of the mine, and every 2 or 3 yards the attle is carefully piled as a wall in the full dip line. The object of this is to form a firm footing or bed for the superincumbent coal to rest upon. After the first 12 yards length of coal has been worked out the second 12 yards in length is similarly worked out. By this time the third stall will have been driven to the boundary, so that the working out of the first 12 yards in length between the second and third stalls can be commenced. In this manner the working out of the lower 2 yards in height of the seam is carried forward, each pillar as it is completed being worked away back towards the jig-brow in 12-yard slices, the excavated space being carefully filled with attle packing, with pack walls every 2 to 3 yards, running on the full dip or rise of the seam, for the purpose of forming a solid bed on which the coal may rest. In order, however, to prevent the coal becoming heavily weighted upon the pack it is advisable to commence working away the second 2 yards in height of the seam as soon as possible. Hence as soon as the lowest 2 yards in height of the first pillar have been worked out the second or middle stage of 2 yards is opened out, by putting up a rise 2 yards in height from the first stall close to the jig-brow, and driving a stall towards the boundary, A second stall is opened out in a similar manner, and the working away of the first pillar in the second stage is commenced, immediately on the second stall reaching the boundary. The second and third stages are got in an exactly similar manner to the first, the third stage being commenced as soon after the second as possible. It is not necessary to pack tight the space left vacant by the winning of the third last stage. The packing of the first and second stages thus form the floor for the miners when working the second or the third stages. The coal being of a comparatively brittle nature it is necessary to have recourse to timbering for the stalls as well as the working face.

The thick seams of Silesia are usually worked by the method we designated strike pillar workings, though owing to the great thickness (10 yards in some cases) modifications are necessary. The seams are usually opened out by means of levels and brows, which divide the mine into compartments or panels. Each compartment is generally opened out by driving two brows, one at each side, one of which serves as the jig-brow for the compartment, the other as a boundary road, between which and the jig-brow serving the next compartment a safety pillar is left to preserve the jig-brow. As the jig-brow is driven on the full rise of the seam, the lower end where it joins the main level is curved, or inclined, so as to be able to brake the train of corves more easily into the main road. The stalls, which are driven parallel to the main level, are not driven in the full thickness of the seam, generally only 9 ft. to 10 ft. in height, from 9 ft. to 15 ft. of coal, according to the thickness of the seam, being left up to form the roof. The width of the stalls is in most cases one and a half times the thickness of the pillars left between them—about 4½ yards, the pillars being 6¾ yards thick.

At the Queen Luise Colliery the stalls are driven only 3 yards wide; the roof is arched, the pillars at the same place being left as much as 10 yards in thickness. The mode of getting the pillars is varied according to the inclination of the seam. When the inclination is slight the pillars are generally worked in slices of a given width from one stall to the next stall above, so that the actual working face advances on the full rise of the deposit. When the inclination is considerable it is necessary to work the face in the direction of the strike line. The following description refers to the former mode of working. The width of pillar usually worked away at once is the same as the width of the stalls—4½ to 5 yards. Supposing that the first and second stalls, 5 yards in width, have reached the boundary road (which connects them), leaving a 7-yard pillar between them, the following is the mode of commencing to work away the coal. The roof coal (9 ft. to 15 ft. thick) left above the stalls and boundary road is hewn down to the roof in case the latter is good, and to within 12 in. to 15 in. of the roof in case the roof is bad and broken. The roof is thus exposed in the boundary road to below the second stall, and in the two stalls from the boundary road to beyond the first slice intended to be got from the pillar, That is, the roof coal is first taken down in the boundary road over a length of about 19 to 20 yards (or 2 to 3 yards past the low side of the second stall). The width of the pillar intended to be sliced off at once being 5 yds. the roof coal will be hewn down over the first and second stalls for a length of 7 to 8 yards. Before beginning to work away the first slice of the pillar the first stall will be well timbered by two rows of long props, 9 in. to 10 in. diameter, the props being placed 21 in. to 23 in. apart, centre to centre. The rows are placed within 5 in. to 6 in. of the sides, the props being sufficiently long (6 to 8 yards) to reach from the floor to the roof. In a similar manner the second stall is timbered on the low side only, close to the top side of the second pillar. The boundary road is similarly timbered on one side only—that close to the safety pillar. The object of these rows of timber is to keep up the roof, and afford support for the roof when working away the safety pillars, and the first slice from the second pillar. Generally props alone are used; in some cases it is found necessary, or advantageous, to use long bearers next the roof, supported on the underside. In addition to these props the ends of the stalls, in a line with the line of division between the first and the second slices of the pillar, are timbered with a row of props, surmounted by a cap piece, being strengthened with a second row of props, and strutted against the floor of the stall with inclined struts. A description of this mode of timbering was given in the previous section. The upper end of the boundary road, in a line with the low side of the second stall, is timbered in the same manner. The object of this timbering is to prevent the debris from falling or rolling into the stall when the roof breaks down. The working away of the slices takes place either by overstoping or understoping, the step-like arrangement being exhibited by a cross section of the pillar, taken at right angles to the stalls. The most usual method is by understoping, since the coal is easier to get, the whole of the roof can be seen, and dangerous places supported by timbering; whilst when overstoping is the method employed ladders and scaffolding must be provided for the men to stand upon when getting the upper portion of the seam; and the last portion of the slice is difficult to get, a portion of it being often lost. During the time that the first slice is being got a close row of props is placed next to the solid side of the pillar, to form a support whilst getting the second slice. As soon as the first slice has been finished the timbering is robbed, and the excavated space allowed to fall in. This does not always occur immediately on robbing the timber, and sometimes first only after several slices of the pillar, or pillars, have been got. After the first slice has been completely got, the timber robbed (that to support the roof in the middle of the excavation, and not the rows above mentioned, which are left up to protect the safety and the boundary pillars), the roof coal in the first and second stalls is then got down over another length of 5 yards, when the timbering put up to prevent the falling in of the rubbish from the goaf into the stalls is robbed and removed 5 yards back in the stalls, to be again put up. A row of timbering is put up close to each side of the first stall, and the low side of the second stall. The second slice of 5 yards is then got in a similar manner, the row of props put up whilst getting the first slice keeping up the roof on the loose side; a fresh row of props is put up close to the solid side, to keep up the roof whilst getting the third slice. When the second slice has been got, and the timber borrowed from the space formed by excavating the second slice, including the row of props put up whilst getting the first slice; the roof coal is then taken down in the first and second stalls for another 5 yards, the stall timbering removed back that distance, and the getting of the third slice commenced. In this manner the working away of the coal is proceeded with in the first two stalls and the first pillar till the first pillar has been worked out for a length of 20 yards. The roof coal in the boundary road is then taken out up to 3 yards or 4 yards below the low side of the third stall; the timbering (to prevent the rubbish from the goaf rolling into the road) is then removed farther down the boundary road, so as to be in a line with the low side of the third stall. At the same time, the roof coal in the third stall is taken down over a length of 7 or 8 yards, and a set of stall timbering put up 5 yards from the end of the second pillar. When this has been completed the working away of the first slice in the second pillar can be commenced. When the working away of the second pillar has advanced a length of 20 yards the working away of the third pillar is commenced in the same way, by taking down the roof coal in the boundary road up to 3 or 4 yards below the low side of the fourth stall, and in the fourth stall over a length of 7 to 8 yards, with the setting up of the above-described stall timbering. In this manner the working away of each pillar precedes that of the one below by about 20 yards. The working away of each slice of 5 yards length of pillar follows alternately with the getting of the roof coal in the stall on the low side over the same length of 5 yards, with the exception of the topmost pillar, the working away of the 5 yards slices of which alternates (following) with the getting down of the roof coal over the same length in the stalls on both sides. As we have above mentioned the roof often breaks down when a considerable space has been excavated. When this occurs the breaking in of the ground reaches the surface, so that it becomes advisable in many cases to rail in the ground at its surface to prevent accidents; and since the ground may become much broken at the surface the surface soil is often taken up before the breaking in of the ground, being replaced after the ground has been levelled.

In some cases it is usual to leave a portion of the pillar, from 5 ft. to 7 ft. wide, in place of the row of props, for keeping up the roof. This, however, has, besides the loss of the coal contained in the pillar, the additional disadvantage that the slice of the pillar worked out has two fast sides.

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath Dr. Von Groddeck, Director of the Royal Bergakademie, Clausthal, The Harz, North Germany.

MINERS' CONFERENCE AT WIGAN.

A conference of delegates from the various miners' societies throughout the counties of Lancashire and Cheshire was held on Monday, in the Miners' Hall, Wigan. Mr. William Pickard, of Wigan, presided, and about 130 delegates were present, representing some 30,000 miners.

OVERWINDING ACCIDENTS AT COLLIERIES.

Mr. Pickard said they were met to discuss several important questions affecting miners. The first was as to accidents by overwinding at collieries. They would be aware that a Royal Commission had been appointed to consider what could be done to prevent accidents in mines, but in spite of that Commission and the improvements that were being made in mining machinery week after week they heard of frightful accidents at their collieries. With reference to over-winding accidents, it was he said, an acknowledged fact that the speed at which the men were lowered and raised at the pits had been greatly accelerated, and as a consequence that must lead to an additional percentage of risk. The transit of men and material from the bottom of the mine to the surface was carried on at a much greater speed than was employed in the locomotive departments of the great railway companies. It was the duty of all to see that these operations were carried on at the least possible danger, and so as to prevent accidents occurring from any error of judgement or absence of mind that might happen on the part of the engineman. In some things particularly they were making great progress, but he did not think they had made a sufficient advance in regard to winding accidents. He was proud, as a Lancashire man, to be able to say that they had in Lancashire some of the finest winding enginemen—men fit to be placed at the handle of any engine, men who for sobriety, steadiness, ability, and application stood second to none; but yet with all that an error of judgement might take place, and a man might be a little absent and be under the impression that the cage was going down when in reality it was going up, as was the case at St. Helens. They should make some progress in adopting mechanism and appliances which would prevent such a catastrophe, and he considered that if the most recent appliances had been in use at that pit they would not have had to lament the unfortunate death of seven of their fellowmen. One of the objects for which they were assembled was to ask the Government to make it compulsory on the part of colliery proprietors to adopt appliances to obviate such a danger as over-winding, which had been a fruitful source of accident in years gone by. He referred to the various detaching hooks which had been patented—King's, Ormreod's, and Walker's. He was informed that no fewer than 360 lives had been saved by King's hook, and there was no telling the amount of damage to property which had been prevented and the money which had consequently been saved to the colliery proprietors. In this matter they ought not to stand still. It was their bounden duty to press upon the employers the necessity of using every piece of mechanism that was manufactured that would go in fairly for a saving of life and property. The detaching hooks had been proved to have saved life, and they were no detriment to the speed of the winding.

A delegate from St. Helens moved that the Home Secretary be asked to take into consideration the advisableness of making compulsory the use of detaching hooks at all collieries. This was seconded by another delegate. Both said they worked at collieries where detaching hooks were used, and where they had recently been the means of preventing over-winding accidents.

Mr. Pickard said some managers had given it as their opinion that detaching hooks would lead to negligence on the part of the enginemen. He scouted the idea. It was preposterous to suppose that enginemen out of sheer carelessness would wind men on to the pullies because they knew that safety hooks were in use.

Mr. Beech, Oldham, said it was high time the men looked after themselves and their families. It was only by united efforts that they would get the use of detachment hooks made compulsory.

A long discussion followed, during which Mr. Pickard said the present Home Secretary had always shown a desire to protect the lives of the miners—in fact, there had been no Home Secretary who had ever shown a greater disposition to comply with the wishes of the miners than had Mr. Cross. He felt sure, speaking apart altogether from politics, that they had only to place their grievances before him to get them redressed.——The resolution was carried unanimously.

THE HOME OFFICE AND COLLIERY INQUESTS.

Mr. Pickard then introduced the question of holding coroner's inquests on the bodies of those killed by accidents, and referred to the recent regulation of the Home Office that in cases where more than one death was caused by accidents the enquiry should only be taken on one of the bodies. The new instructions came first into force at the holding of the overwinding accident at St. Helens, where the coroner accordingly only took evidence of identification as to one of the killed, and only gave one certificate. He strongly condemned the action of the Home Office, and said it had been brought about by the influence of the county magistrates. He instanced many cases where the new instructions would deal cruelly and unjustly with the interests of the miners, especially where many deaths had resulted from one accident and where the relatives of the deceased were often able to give valuable information as to the management of the colliery in question. The direction of the Home Secretary was, he said, contrary to law, for it was clearly laid down that when a death resulted from violence of any description no burial could take place, nor could a registrar give a certificate of death, unless an inquest had been held. Unless the instructions of the Home Office were withdrawn the law would have to be stretched, for in accidents causing many deaths there would be no inquest on the majority of the bodies; and if the registrar chose to be stupid and refuse to give certificates, they would have to remain above ground.

A long discussion followed, and a memorial to the Home Secretary was adopted, praying that the new regulation might be rescinded.

THE WAGES QUESTION.

The Conference then proceeded to discuss the wages question. The meeting resolved that the time had arrived for an advance of wages to be applied for, and decided to ask the masters to grant an advance equal to the last reduction. It was also resolved to request the masters to receive a deputation to discuss the advisableness of adopting a sliding scale for the regulation of wages in the future, and also to discuss the present application for an advance. The Conference was adjourned for three weeks to hear the result.

A deputation was also appointed to wait upon the Home Secretary with the memorial mentioned above.

PARIS UNIVERSAL EXHIBITION OF 1878.

THE SOCIETY OF ARTS ARTIZAN REPORTS.

For those who had not the pleasure and advantage of a visit to the Paris Exhibition last year, the instructive and entertaining volume* of reports by the artizans who attended the Exhibition under the auspices of the Society of Arts is probably the best substitute. The ordinary visitor being naturally desirous to see everything as quickly as possible, and not having his attention directed to any particular class of exhibits or to any special improvement in the details of manufacture, not unfrequently misses exhibits, the deliberate study of which would be of utility to him in his own business, but the writers of these reports having a special object in view, and being competent to express an opinion of value to their fellow-workmen, even the general reader will have confidence that the relative merits of British and foreign work and the amount of progress being made are accurately stated.

The character of the reports themselves can leave no doubt as to the judgment displayed by the Society of Arts in selecting the artizans to make them. They are well written and to the point, and, as far as can be judged, are thoroughly impartial, and point out the matters in which the British can usefully imitate their rivals abroad and those in which the British enjoy superiority. The reports are 39 in number, form a handsome volume of nearly 700 pages, and include pottery, pottery and earthenware, pottery and porcelain, china painting, terra cotta, table and fancy glass, stained and painted glass, ornamental ironwork, carved woodwork, wood carving, stone carving, machine tools, three on mechanical engineering, agricultural implements, and machines, horticulture, flower and ornamental gardening, bricklaying, stone and machinery used in stonework, plastic work, cement crushing machinery, joinery, furniture, cabinet work, cabinet making, watch and clock making, clocks and watches, jewellery, optical instruments, printing, printing machinery, machinery for spinning and for manufacturing woollen and cotton fabrics, manufacture of poplins, saddlery and harness, shoemaking, caoutchouc, mining products and apparatus, and iron and steel manufacture.

The preparation of these reports is really due to the Prince of Wales, who asked the Society of Arts to send a number of selected artizans to Paris to make reports similar to those of 1867, making a practical addition to his request by intimating his intention of subscribing to the fund which would be required for the purpose of carrying the proposal into effect, and by appointing a committee of Royal Commissioners to co-operate with the Council of the Society. The Prince, the Royal Commissioners, the Society of Arts, several of the City Guilds, and a few private firms subscribed, whilst nine towns, the Coachmakers' Company, three coachmaking firms, the builders' society, and another private firm selected their men and paid their expenses. The charges for 140 men were thus paid, the Society of Arts sent 57, and 7 paid their own expenses, but were allowed to avail themselves of certain facilities and privileges. The total number of artizans sent through the agency of the committee was, therefore, 204. Special arrangements were made for their journey and reception at Paris, and they were furnished with board and lodging at special rates while on the visit, and the assistance of interpreters when making their investigation. The volume is one which should be in every Mechanics' Institution library, and should be read by all desirous of knowing what progress is being made in the trade with which they are connected.

* London: Sampson Low, Marston, Searle, and Rivington, Fleet-street.

ON A NEW PYROMETER *

During an investigation into the action of ultramarine muffle furnaces, the author had occasion to determine temperatures up to 900° centigrade (1652° Fahr.) For this purpose he tried a graphite pyrometer by Steinle and Hartung, and also a calorimeter, but the pyrometer proved quite unreliable for temperatures above 650° centigrade (1202° Fahr.), and the calorimeter method, though exact, was both slow and troublesome. The most satisfactory method in practice was found to be the use of alloys and metals whose melting points had been previously determined, and the author designed the apparatus described, in order automatically to register the exact moment at which a given alloy melts in the interior of a furnace.

The apparatus consists of a vertical tube of refractory material, which dips deeply into the muffle; inside this a small crucible is hung from a scale beam above; in the bottom of the crucible is a hole, so that when the alloy melts it runs through into a dish suspended underneath. This causes the scale beam to rise, and the motion of the beam, by electrical contact, rings a bell, and marks a dot on a sheet of paper travelled by clockwork; this registers the exact time at which the melting point is reached. The melted metal can be lifted out and preserved for future use. This method registers only a series of definite temperatures, but proved quite sufficient in practical use.

— By Dr. E. Buchner: Dingle's Polytechnisches Journal.

* From James Forrest's "Abstracts of Papers in Foreign Transactions and Periodicals," for the Proceedings of the Institution of Civil Engineers.

Silicate Cotton.— Following the remarks in last week's Journal, Mr. John Alexander writes that a few days ago a gentleman connected with one of the large ironworks in the North of England informed him that at his works slag had been converted into wool by the furnacemen as a pastime for more than 20 years, but that Mr. Alexander's sample was the first he had seen "with a commercial value put upon it." That anyone connected with ironworks should know so little about what is going on in his own trade is lamentable, there being a large number of patents both for producing and utilising the slag wool or silicate cotton, and some of them have been very successful. Referring to the subject, Messrs. Suter, Hartmann, and Co., the Glasgow agents for Krupp's silicate cotton, naturally take exception to Messrs. Dade and Co.'s statement that says small quantities of "so-called" silicate cotton, manufactured in Germany, "occasionally" find their way into this country, and they continue in the same paragraph to crush, if they could by words, the use of German silicate cotton altogether. Messrs. Suter and Co. add: When we explain to the public that Messrs. D. H. Dade and Co. were at one time agents for this "so-called" German silicate cotton

(which is made by Herr Krupp, of Essen), but having lost the agency mixed themselves up with anyone else who could manufacture an article as similar as possible, it will easily be seen where the shoe pinches, and why, when a chance does occur, they should try to run down the German article to the extent they have done. We, however, leave it in the hands of the public—who have to use it—to judge which crumbles to powder the quickest on the least friction, the English or the German "so-called" silicate cotton.

ROYAL SOCIETY.—The medals awarded and recommended by the Council of the Royal Society for the present year are:—The Copley medal to Prof. Rudolph J. E. Clausius, of Bonn, for his well-known researches upon heat; the Davy medal to Mr. P. E. Lecoq de Boisbaudran for his discovery of gallium; a royal medal to Mr. William Henry Perkin, F.R.S., for his synthetical and other researches in organic chemistry; and a royal medal to Prof. Andrew Crombie Ramsay, F.R.S., for his long-continued and successful labours in geology and physical geography. These medals will be presented at the anniversary meeting of the society, on Dec. 1, when Mr. W. Spottiswoode will deliver his first annual address as President.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

THE GENERAL ELECTRIC SOCIETY (Limited).—Capital 1,000,000*l.*, in shares of 10*l.* To acquire different patents, and to supply electric and magnetic lights in the United Kingdom and elsewhere. The subscribers (who take one share each) are—J. D. Shakespear, 7, Saville-row; R. Sabine, 7, Great Winchester-street; S. Canning, 7, Great Winchester-street; R. E. Cooper, 1, Westminster Chambers; A. C. Nairne, 119, Westbourne-terrace; J. Maw, East India Avenue, D. Campbell, Quality-court.

THE CLOGWYN-Y-GWIN SLATE QUARRY COMPANY (Limited).—Capital 40,000*l.*, in shares of 5*l.* The adoption and carrying into effect an agreement made between R. R. Williams and R. B. Tennant on behalf of the company. The working and developing a quarry the subject of said agreement. The subscribers (who take one share each) are—F. J. Kirby, Bramerton-street; J. Garrett, 21, Crosby Hall Chambers; W. R. Merrett, 2, East India Avenue; R. W. H. Newington, Tower Chambers; R. Mack, 88, London Wall; E, Carter, 85, Gracechurch-street; H. C. Hill, 8, Union-court.

BRADFORD HOTEL COMPANY (Limited).—Capital 30,000*l.*, in shares of 10*l.* To acquire by purchase or otherwise the Alexandra Hotel, at Bradford, and to carry on the business. The subscribers are—C. Gott, Bradford, 75; J. Bucroft, Bradford, 75; G. Pearson, Bradford, 75; T. A. Watson, Bradford, 75; W. Gossop, Bradford, 5; G. Hepworth, Bradford, 10; C. J. Wightman, Bradford, 5.

THE AUSTRALIAN AND NEW ZEALAND MORTGAGE COMPANY (Limited).—Capital 1,000,000*l.*, in shares of 10*l.* The investing of money on land, mortgages, and other securities in the colonies. The subscribers (who take 100 shares each) are—C. A. French, Abchurch Chambers; J. S. Hill, 32, Great St. Helen's; F. W. Buxton, 62, Threadneedle-street; J. Sanderson, Basinghall-street; R. Philpott, 3, Abchurch-lane; A. Ricardo, 11, Angel-court; F. Banks, 3, Edinborough-terrace.

THE OMNIUM SECURITIES COMPANY (Limited). — Capital 1,000,000*l.*, in shares of 10*l.* To acquire the stocks, shares, securities, and assets, of the Omnium Stock Trust, and continue the business. The subscribers (who take one share each) are—F. Bennoch, 5, Tavistock-square; F. H. Fowler, 9, Sergeant's Inn; E. J. Evans, Canonbury; A. W. Ray, Brixton; J. C. Amos, Barnet; A. Scott, Streatham; R. W. Pelly, Walthamstow.

THE OSSEIN TANNING COMPANY (Limited).—Capital 150,000*l.*, in shares of 5*l.* To purchase patents in connection with tanning, and carry on the business of tanners and curriers in all its branches. The subscribers (who take one share each) are—J. Davies, 21, Finsbury Park-road; J. F. Copeland, Penge; J. Andrews, Tollington Park; H. Wickens, 145, Palmerston Buildings; J. Dayer, Bermondsey; C. Court, Bermondsey; Albert Grant, 5, Lothbury.

THE RODNEY COMPANY (Limited).—Capital 6000*l.*, in shares of 3*l.* The formation of a non-political club at Liverpool, with all the necessary accessories. The subscribers are—K. Banks, Liverpool, 5; H. Carnidge, Liverpool, 1; S. Campbell, Liverpool, 5; E. A. Morgan, Liverpool, 5; T. Nuttall, Liverpool, 5; J. Palmer, Liverpool, 5; G. Peet, Liverpool, 1; J. Steel, Liverpool, 5; R. E. Stewart, Liverpool, 1; T. Willacy, Liverpool, 5.

THE EFFUENTA GOLD MINES COMPANY (Limited).—Capital 50,000*l.*, in shares of 5*l.*, ordinary and deferred. To adopt and carry into effect an agreement made between Paulus Dahse on the one part and F. Fitzgerald on behalf of the company, for the purchase of the lease and concession of certain land called Effuenta, situate on the Gold Coast of Africa, and the exclusive rights of mining therein granted by chief Guabinah Angoo. To purchase or otherwise acquire any other mines, minerals, ore, concessions, &c., on the Gold Coast, and to work, construct, maintain, and improve roads, tramways, railways, piers, wharves, mills, and any other works and buildings that may be deemed necessary or profitable. The subscribers (who take one share each) are—J. Irvine, Liverpool, merchant; W. Geikie, Liverpool, broker; S. Hecht, 14, Hamsell-street, merchant; C. Hecht, 14, Hamsell-street, merchant; E. Berman, 30, Addle-street, merchant; M. Haas, 30, Addle-street, merchant; F. Fitzgerald, 121, Fleet-street, newspaper proprietor. The first directors shall be Messrs. Ervine, S. Hecht, Berman, and S. Cearns. Secretary, F. Fitzgerald. Directors' qualification, 50 share. The remuneration to be fixed by the shareholders in general meeting.

FARMERS' AND CONSUMERS' CO-OPERATION (Limited).—Capital 100,000*l.*, in shares of 10*l.* and 1*l.* To carry on the business of a co-operative company in providing all kinds of foods for consumption, including farm, dairy, and market produce. The subscribers (who take one 10*l.* share each) are—C. Messent, 108, Fleet-street; G. E. Wright, 1, New Broad-street; C. Smith, Leamington; W. H. Brown, Bidford; R. K. Shibbs, Bromley; T. Brooks, New Cross; C. H. Davison, 2, Milner-square.

JAMES DODGE AND COMPANY (Limited).—Capital 43,000*l.*, in shares of 10*l.* To purchase from the liquidator the patents, inventions, lands, buildings, works and goodwill of a former company named James Dodge and Co. (Limited), and to carry on the business of merchants and dealers in iron, steel, and other metals. The subscribers (who take one share each) are—J. Bright, Alderley Edge; H. Rawson, Manchester; G. Spencer, Manchester; S. J. Negroponte, Eccles; J. J. Clark, Manchester; R. W. B. Sanderson, Tyldesley, Manchester; J. Dodge, Burkdale.

MARTIN'S PATENT SELF-CANTING ANCHOR AND CHAIN CABLE COMPANY (Limited).—Capital 100,000*l.*, in shares of 10*l.* To work certain patents, and carry on the trades of ironmasters, miners, smelters, engineers, and manufacturers of anchors, cables, bolts, &c. The subscribers (who take one share each) are—W. F. Nuthall, 40, Burner's Court-road; T. S. Atkins, Anerley; W. C. Devereux, Chislehurst; H. N. Maynard, 7, Westminster Chambers; J. H. Mandeville, 13, Falmouth-road; J. D. Scott, Camberwell; H. J. Cooke, Anerley.

NANT RHYS SYNDICATE (Limited).—Capital 3000*l.*, in shares of 1*l.* To purchase or otherwise acquire the right to work a mining sett known as Nant Rhys, situate in Montgomeryshire. To erect stamping machinery, furnaces, mills, and all the necessary plant and appliances connected with the property of the company. To dress, smelt, crush, and refine any ores and minerals, and to realise and deal with the products. To construct all necessary roads, tramways, railways, &c. The subscribers are—J. Lord, 6, Holtham-road, 20; H. C. Elliott, 23, Holborn Viaduct, 5; W. A. Barron, Richmond, 50; N. L. H. Clark, Tynemouth, 50; A. Chadbourn, 57, Tulse Hill, 8; E. J. Daken, Holloway, 2; H. C. Richardson, Stoke Newington, 2. Messrs. Barron, Clarke, and Wright to be the first direrors, the number not to exceed seven or be less than three; qualification 50 shares.

THE THURSO NEW GAS COMPANY (Limited).—Capital 15,000*l.*, in shares of 10*l.* To manufacture gas for lighting Thurso and neighbourhood generally. The subscribers are—J. M. Cowburn, Birstall; 10; M. Fox, Mirfield, 25; R. Dempster, Ellanse, 30; S. Day, Wakefield, 10; L. R. H. Walker, Dewsbury, 10; J. A. Thornton, Wakefield, 10; A. H. Fryer, Dewsbury, 5; A. Foster, Dewsbury, 5; C. Walker, 5, Serjeant's Inn, 10.

THE MORTGAGE AND AGENCY COMPANY OF CEYLON (Limited).—Capital 1,000,000*l.*, in shares of 10*l.* To lend and advance moneys upon real and other property, and all kinds of securities. The subscribers (who take 100 shares each) are—D. A. Chaytor, Fenchurch-street; H. A. Evatt, Croydon; H. D. H. Fergusson, jun., Carlton Club; S. Saunders, Colombo; T. Reeves, King's Arms Yard; E. W. Scovell, Beckenham; E. Webb, Great Tower-street.

DEATH OF A "MINING KING."

We deeply regret having to announce the death of Mr. PETER STAINSBY, which took place at his residence at Clapham Common on Nov. 13, at 83 years of age. In early life Mr. Stainsby entered the old London banking firm of Messrs. Bosanquet and Co., and eventually, we believe, was offered a partnership in that house, or the management of one of the then largest ironworks and collieries in South Wales. He, however, declined the former and accepted the latter office, which soon brought him in connection with Cornwall and Devon. He ultimately became chairman and managing director of numerous large and prosperous mining and lead and tin smelting undertakings in Cornwall, Devon, Shropshire, and elsewhere. At one period it was stated that he himself had investments in various companies approaching half-a-million sterling, and at the time we allude to he was designated "The Great Mining King." His nephew, Mr. Peter Watson, who is much respected and well known to our readers in connection with the several leading mining and smelting interests, entered Mr. Stainsby's establishment in the year 1844, and became his head and active manager of the lead mining and smelting department in London, and for some two to three years in Cornwall. We would here take this opportunity of stating that but few men, if any, have greater knowledge of, or have shown greater ability and activity in connection with the welfare of, our home mining industries than Mr. Peter Watson has. His forethought and, we may say, forecast in regard to the mining and metal markets during the recent great depression have been fully verified.

CAPTAIN WILLIAMS, OF THE VAN MINES.

A career of much importance to the mining interests of our country has been prematurely closed by the early death of Capt. WILLIAMS, of the Van Mines. Capt. Williams' life has been very eventful, and it is a striking illustration of force of character and indomitable perseverance, combined with honest industry, which surmounted every obstacle. Capt. Williams commenced his mining career at the Great Holway Mines dressing-floors, near Holywell, at 4d. a day, under the late Mr. Harrison, the manager. At the early age of 17 he left his home to obtain work, which he found in the neighbonrhood of Llanrwst; his first appointment there was at 8s. a week. The manager there soon discovered his abilities as a dresser, and promoted him to the post of superintendent of the dressing-floors. His next appointment was at the Cwmheisian Mine, near Dolgelly, under the management of Mr. Arthur Dean, where his great knowledge of dressing difficult ore brought him ready employment. After spending some time here he again removed, this time to the Dyfngwm Mines, near the celebrated Dyliffe Mines, and from thence to the Gorn Mine, near Llanidloes; at both of these places he was the chief dresser. From thence he removed to Penclyn Mine, where he undertook both the underground and surface management. After a successful career there, realising large profits to his employers, he took charge of the Nanty Mines, about nine miles from Llanidloes, on the Aberystwith road; first of all for Mr. Lefeaux, and finally for the Messrs. Taylor. While there he discovered the West Nanty and Dol Mines, now called Wye Valley and West Wye Valley,

His connection with the Van Mine may almost be said to be contemporaneous with his taking the management at Penclyn, the lode there being the identical Van lode; this, doubtless, led to the great discovery at the former mine. Capt. Williams worked the Van Mine for Messrs. Morris and Howell, commencing in July, 1854. He continued in the management until his death, a period of about a quarter of a century It was in the year 1865 that he cut the great productive lode, and so confident was he of the certainty of this great discovery to be made that he conducted the management, for a period of eight years, up to 1865 gratuitously. He did this to encourage the proprietors, and in the furtherance of what he esteemed his life work. In 1866 he left the Messrs. Taylor, and devoted his time wholly to the Van. In 1868, when the mines were sold by Messrs. Morris and Howell to the present company, Capt. Williams took the helm, and since then he carried out the developments underground and at surface which have rendered the Van Mine possibly the most celebrated of its kind in our country.

Many great improvements in the working of this great and difficult lode were effected by Capt. Williams, and improvements in the dressing department have been carried out to such an extent that these mines may be said to as nearly approach perfection as can well be looked for. They remain monuments of his genius and ability—no mean legacy to posterity. The bond of union existing between Capt. Williams and his employers was at all times more of the nature of friendship than of an ordinary business character, his services were so highly appreciated. At the same time his humility always kept him in his place, faithful to the duties he had undertaken. His consideration for his workmen had ever a foremost place in his mind, and the large chapel, with schools and reading-rooms attached thereto, bear testimony to his zeal in the interests of his men and the cause of religion. He died on Saturday last, the 15th current, aged 54 years, after nearly 12 months of very painful suffering, which he bore with christian fortitude and resignation. He was followed to the grave by all the workmen and employees at the mines, together with a large concourse of friends, the cortege more resembling a public funeral than anything else.

MAKING MALLEABLE STEEL.—A Washington despatch says that considerable interest is being manifested in a series of experiments now being made in the forge at the Washington Navy Yard upon large ingots furnished by a Boston firm, the result of which, it is thought, will obviate entirely the necessity for using foreign material as heretofore, and demonstrate the advantage of steel over iron for heavy forgings, such as shafts, connecting-rods, cranks, axles, heavy ordnance, &c. It is claimed that a new process has been discovered, by which the hardest steel is rendered as soft and malleable as the best Swedish iron, and the experiments thus far are regarded by mechanics and engineers as of the most satisfactory character.

FUEL.—With a view to render mineral fuel such as coal, coke, anthracite, &c., as combustible as charcoal Baron HAUSSMANN and Mr. C. EDWARDS, of Paris, propose, first, to grind the fuel to fine powder, and then thoroughly mix with it a small percentage (about 2 to 4 per cent.) of potash, soda, or baryta, combined or not with a suitable acid, such as carbonic acid for example. This addition, which might be more considerable, is employed in the form of a powder or dissolved in water. Several salts of soda, potash, &c., such as the aluminates of these bases, for example, give the desired combustibility as well as other salts and different combinations to be indicated hereafter, but it should be observed that the chlorides of potassium, sodium, &c., will not produce this result, so that in order to succeed it is necessary to have an oxygenated combination (of potassium, sodium, or barium, together or separately), capable of bringing by chemical affinity the oxygen of the air in contact with the coal, which when sufficiently heated, will in certain cases revivify by its reaction the alkaline metals, the high combustibility of which is known. The alkaline manganates and several salts of this description can, therefore, be employed for the object in view. The mixtures of coal with the oxides of potassium, sodium, &c., and the salts already mentioned may be converted into a highly combustible coke. To obtain this in the form of that from gas retorts or coke ovens it is only necessary to introduce the above mixtures in the same way that coal is put into the retort or oven for making gas, or for preparing coke for metallurgical purposes. If the fuel is required of uniform shape, they add to the finely powdered coke of lean or anthracitous coal, besides the products of potash or soda, &c., some agglomerating substances such as tar, pitch, oils, paste, the gelatinous extract of the fucus crispus, lichens, &c. The mode of moulding which they prefer and reserve to themselves for this kind of fuel is that adopted in making vermicelli or maccaroni, whereby the fuel is produced in a very subdivided yet solid state, which is very accessible to the oxygen of the air, or the fuel may be otherwise moulded. The substances intended to be passed through the moulding machine must be worked or kneaded either in a mortar mill or between rollers. The above agglomerated substances are ordinarily heated in gas retorts, which enables him to obtain oils, tar, or pitch, which can be used for the manufacture of other agglomerative fuel similar to those distilled when these have been used as the agglomerating agents.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS, &c
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

In the year 1843, when mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843 by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash, for the usual fortnightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charge for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in on the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

In the reign of Queen Anne a great discovery of silver was made in the Ochil Hills in Scotland, on the estate of Sir John Erskine! The ore was so rich that 14 ozs. of it yielded 12 ozs. of silver. For a time the mine paid a profit of 4000*l. a week*, and then failed. Sir John, walking over the estate with a friend, said, pointing to the shaft —"Out of that hole I took 50,000*l.*;" and then, walking a little further, and pointing to another shaft, continued—"But I put it all into that hole!" How often in this latter respect does history repeat itself.

The agent of Clementina, Capt. Sandoe, writes us—"We hope to sample 10 tons of lead by the next pay. The points we are carrying out are of the most encouraging and promising character. In the end north from the bottom of engine-shaft the lode is a very kindly one, and is yielding very nice lead, with no level driven over it for 20 fms.—that is to say, there is no level driven between this and the 15 fm. level, and in the bottom of that level there is lead in the bottom of the sinks, and we are now getting to within a few fathoms of being under them. In the roadside shaft, also, there is a good lode in the bottom of the level for 20 to 30 yards long, which will lay open a fine piece of ground for stoping when we get down the shaft 10 fms. deeper. The mine, on the whole, is looking most promising, and will make a good mine without doubt." It may be remembered that at the shallow level upwards of 1500*l.* worth of lead was raised and sold. Then we sunk the shaft down to the 34 to get under the lead ground, but the wheel was not powerful enough to contend with the water, and we were drowned out for many months, and have been chiefly occupied with erecting a powerful 60-ft. wheel, putting in larger pumps, &c. This wheel now pumps from two shafts with ease—the roadside shaft and the old engine-shaft—and at both the prospects are good. From the roadside shaft the lead runs under the meadow, to which we have often referred, and where we look for great riches.

The agent of South Frances, by his letter in the *Mining Journal* of last week, would evidently have his readers believe that the "baseless rumour" of the encroachment into West Basset sett had emanated from us, whereas we referred to it at the time as emanating from a local paper, and we copied the poison and gave the antidote at the same time. Mr. James says there is no foundation for *some* of our remarks, but he does not specify which. The simple truth is this, as we have often stated before, the mine has a very rich course of ore, which can be worked very profitably to a certain point, and just so long good dividends will be paid, and the shares will be kept up. But for a *permanent* mine a heavy outlay must be incurred. This is well known in Cornwall, and should be, in justice to all, as well known out of it. If Mr. James has really any doubt as to our having a plan of the underground *heave* and working in the flat lode, we shall be happy to publish it, together with the report which accompanied it, having now received permission from our correspondent to do so if necessary.

Old Cook's Kitchen is a tin mine. New Cook's Kitchen a copper mine. Dolcoath was originally a copper mine, so were most of the other tin mines. Some months ago we gave a description of their transition state.

The heading of the Gorse lode of D'Eresby Mountain runs through the whole length of D'Eresby Consols, and is a fine speculation of itself, but at present, as we have frequently stated, we are after the Cobbler's lode in the latter mine, where we expect to get lead at once when cut.

D'ERESBY MOUNTAIN.—The prospects here continue good at No. 5, and we hope before next week to know the value of the lode in the sump below No. 5. Owing to the continued dry weather the water is rather short for dressing operations, but we hope to sell 20 tons of lead before the next pay. The mine is worked at a cost of about 150*l.* to 160*l.* per month. The mine has never been on the market, and consequently the price has been regulated by supply and demand. At present there is a good demand, and shares are somewhat difficult to get; but we are generally in a position to deal either way at a fair margin. We cannot answer the other question exactly at present. Clementina is to the North of D'Eresby Mountain, and there is no mine at work between them that we know of.

WHEAL CREBOR.—It was stated at the meeting that the next sampling would probably be 400 tons, and that if it brought 4*l.* per ton, as the last did, there would be a profit of about 1000*l.* on the two months working. We now understand the sampling will be about 450 tons, and that 100 tons of it will average 10 to 12 per cent.—so that we hope the average price will be greater than the last.

SATURDAY, NOV. 15.—Market firm. Van, 21 to 22; Great Laxey, 18 to 18½; Roman Gravels, 11 to 11½; Tankerville, 5½ to 5¾; East Van, 2⅝ to 2¾; Grogwinion, 3¼ to3⅜; Herodsfoot, 2½ to 3; Leadhills, 3½ to 4; South Darren, 2½ to 2¾; West Assheton, 2¼ to 2⅜; West Chiverton, 4½ to 5; Carn Brea, 52½ to 57½; Dolcoath, 52¾ to 57½; East Pool, 19 to 21; South Condurrow, 14 to 15; South Frances, 11¼ to 11¾; Tincroft, 14 to 15; West Basset, 10½ to 11½; West Frances, 11 to 12; Peevor, 15½ to 16½; Crebor, 5½ to 5¾; Devon Great Consols, 4½ to 5; East Caradon, 2¼ to 3¼; Marke Valley, 25s. to 30s.; Mellanear, 4 to 4½; Parys Copper, 17s. to 19s.; West Seton, 50 to 55; West Tolgus, 26 to 28; Cape Copper, 31 to 32; Flagstaff, 1¾ to 1⅞; Richmond, 9 to 9½; Santa Barbara, 37s. 6d. to 42s. 6d.

MONDAY, NOV. 17.—Market quiet for tin shares. Lead and copper shares

firmer. Carn Brea, 52½ to 57½; Dolcoath, 52½ to 57½; South Condurrow, 13½ to 14½; Tincroft, 14 to 15; South Frances, 11¼ to 11¾; Agar, 5 to 5½; Grenville, 5 to 5¼; Peevor, 15½ to 16½; East Caradon, 3 to 3¼; Crebor, 5⅛ to 5¾; Devon Great Consols, 4½ to 5; Parys Copper, 17s. to 19s.; East Crebor, 22s. 6d. to 27s. 5d.; Mellanear, 4 to 4½; Hingston Down, 7s. 6d. to 10s.; Van, 21 to 22; Great Laxey, 18 to 18½; Leadhills, 3¾ to 4; Roman Gravels, 11 to 11½; Tankerville, 5½ to 6; West Assheton, 2 to 2½; Wye Valley, 12s. 6d. to 17s. 6d.; West Wye Valley, 12s. 6d. to 17s. 6d.; Glenroy Lead, 7s. 6d. to 12s. 6d.; Arendal, 4 to 4¼; Javall, 7s. 6d. to 10s.; Panulcillo Copper, 4 to 4¼.

TUESDAY, NOV. 18.—Tin shares steady. Lead and copper shares in more demand. Carn Brea, 52½ to 57½; Dolcoath, 52½ to 57½; Tincroft, 16 to 16; East Pool, 19 to 21; South Condurrow, 13½ to 14½; South Frances, 11¼ to 11¾; West Basset, 10¼ to 11¼; West Frances, 11 to 12; Basset, 3 to 3½; Peevor, 16 to 17; Kitty, 2½ to 3; Grenville, 5 to 5½; Great Laxey, 18 to 18½; Van, 21 to 22; South Darren, 2¾ to 3; Tankerville, 5½ to 6; West Chiverton, 4 to 4½; Herodsfoot, 2½ to 3; Leadhills, 3¾ to 4; Glenroy, 10s. to 15s.; Devon Great Consols, 4¼ to 4¾; Mellanear, 4 to 4½; Parys Copper, 17s. to 19s.; Crebor, 5⅜ to 5⅝; East Crebor, 22s. 6d. to 27s. 6d.; West Seton, 47½ to 52½; Panulcillo Copper, 4¾ to 4⅞; Arundel, 4 to 4½; Cape Copper, 31 to 33; New Quebrada, 3¼ to 3½; Richmond, 9 to 9¼; Santa Barbara, 40s. to 45s.; Javali, 8s. to 10s.

WEDNESDAY, NOV. 19.—Market for tin shares easier. Lead and copper steady at yesterday's prices. Dolcoath, 52½ to 55; Tincroft, 14½ to 15½; East Pool, 18 to 20; South Frances, 11 to 12; West Basset, 10½ to 11; West Frances, 10 to 12; Cook's Kitchen, 3 to 3½; East Lovell, 2¼ to 2¾.

THURSDAY, NOV. 20.—Market inactive, and prices for the day are as follows:—Carn Brea, 52½ to 55; Cook's Kitchin, 3 to 3½; Devon Great Consols, 4 to 4⅛; Dolcoath, 52½ to 55; East Caradon, 2¾ to 3; East Lovell, 2¼ to 2½; East Pool, 18 to 20; East Van, 2 to 2¼; Glenroy Lead, 10s. to 15s.; Great Laxey, 17½ to 18½; Grogwinion, 3¼ to 3½; Herodsfoot, 2½ to 3; Hingston Down, 10s. to 12s. 6d.; Leadhills, 3¾ to 4; Millenear, 4⅜ to 4⅝; Marke Valley, 22s. 6d. to 27s. 6d.; Parys Copper, 17s. to 19s.; East Crebor, 22s. 6d. to 27s. 6d.; Roman Gravels, 11 to 11½; South Condurrow, 13 to 13½; South Darren, 2¾ to 3; South Frances, 11 to 11⅜; Tankerville, 5 to 5¼; Tincroft, 14 to 15; Van, 21 to 22; West Assheton, 2¼ to 2⅜; West Basset, 10 to 11; West Chiverton, 3¾ to 4; West Frances, 10 to 12; West Seton, 47½ to 50; West Tolgus, 25 to 27; Agar, 5 to 5½; Basset, 3 to 3⅛; Crebor, 5½ to 6; Grenville, 5 to 5¼; Kitty, 2½ to 3; Peevor, 15½ to 16½; Wye Valley, 12s. 6d. to 16 17s. 6d.; Arendal, 4 to 4½; Cape Copper, 31 to 32; Colorado, 1⅝ to 1⅞; Don Pedro, 14s. to 16s.; Eberhardt, 3⅛ to 3⅜; Flagstaff, 1 to 1¼; Frontino, 2½ to 2¾; Javali, 8s. to 10s.; New Quebrada, 3⅜ to 3⅝; Panulcillo Copper, 4⅜ to 4⅝; Richmond, 9 to 9¼; Santa Barbara, 40s. to 45s.

FRIDAY, NOV. 21.—Market rather quiet to-day. Great Laxey, 18 to 19; Van, 21 to 22; Roman Gravels, 11 to 11½; South Darren, 2¾ to 3; Leadhills, 3¾ to 4; Herodsfoot, 2½ to 3; Tankerville, 5 to 5½; West Chiverton, 3¾ to 4¼; Crebor, 5¾ to 6¼; East Caradon, 2¾ to 3; West Tolgus, 26 to 28; Mellanear, 4¼ to 4½; Parys Copper, 16s. to 18s.; Carn Brea, 52½ to 55; Dolcoath, 52½ to 55; East Pool, 19 to 21; South Frances, 11 to 11½; South Condurrow, 13½ to 14½; Tincroft, 15 to 16; West Basset, 10 to 11; Peevor, 16 to 17; West Assheton, 1¾ to 2¼; Cape Copper, 31 to 33; Don Pedro, 14s. to 16s.; Javali, 8s. to 10s.; Panulcillo Copper, 4¼ to 4½.

MR. WILLIAM H. H. WATSON, DEALER in RAILWAY STOCKS and MINING SHARES at net market prices of the day.

WANTED TO PURCHASE—100 Wheal Crebors, 10 D'Eresby Mountain, 20 South Darren, 10 Herodsfoot. State Lowest Price.

Address: W. H H. WATSON, 1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, E.C.

INVESTMENT NOTES.

The past week has been somewhat more quiet, both in the metal and mining share market. Tin mines steady, if not a little higher, while copper and lead are in good demand. Prices for all three metals will probably be higher during next month, as investors would do well to take advantage of the temporary lull, and secure shares before the improvement again sets in. Only a short time since East Caradon shares were recommended in these Notes at 20s. to 25s.; they have been 3¼, "buyers," but are now a little easier. As was before pointed out, the shares will advance on any favourable change in the ground in the South Caradon cross-cut. If the lode proves to be rich there will, no doubt, be a most important rise in the price of shares. Wheal Crebor have been in good demand, and will soon be higher. The lode in the bottom level has improved, and altogether the mine looks very well. East Crebor shares should be purchased at 25s. to 30s. for a rise by-and-bye. The property is a valuable one, and it may not b6 very long before good results are forthcomiug. Among tin shares Wheal Peevor, Tincroft, South Frances, Wheal Kitty (St. Agnes), Carn Brea, Wheal Owles, may now be bought with almost perfect safety. East Lovell, Wheal Basset, and West Peevor are also good speculations. Lead shares have been in demand, and a good business has been done in Herodsfoot, Frongoch, South Darren, D'Eresby Mountain, North D'Eresby Mountain, Leadhills, and others. D'Eresby Mountain shares have advanced, as anticipated, during the week. The mine is no doubt about to realise all the expectations formed of it. It is my opinion that considerable attention will be drawn to this district by the development and promising prospects of various properties in it. Investors still have a chance of buying North D'Eresby Mountain shares at 20s., at which price they are second to none as a cheap and genuine share. Very few mines have the same advantages, such as economical working, situation (being close to the turnpike road and quay on the River Conway), &c.

There has been an enormous business transacted in the Stock Exchange in Brighton, A, Great Eastern, Great Western, North British, Caledonian, Berwick, Dover, A, Erie, Reading shares, Atlantic, Canada, Trunk, Egypt, Mexican, &c. Large sums of money can be realised by obtaining good and cautious advice.

Old Broad-street, Nov. 21. ALFRED E. COOKE.

P.S.—When the above was written Crebor shares were 5⅝ to 5⅞. They are now 6¾ to 7¼, and will go still higher.

REPORTS FROM CORNWALL.

CORNISH MINE SHARE MARKET.—Mr. JOHN CARTER, Camborne (Nov. 20), writes—The Cornish Mine Share Market has been steady during the week, and without particular change to notice. New Cook's Kitchens, Penhalls, and Blue Hills have improved. The closing prices are subjoined:—Blue Hills, ⅝ to ⅞; Botallack, 70 to 90; Carn Brea, 54 to 56; Cook's Kitchen, 3¼ to 3¾; Dolcoath, 53 to 54; East Caradon, 2¾ to 3; East Lovell, 2½ to 3; East Pool, 20 to 21; Killifreth, ⅛ to ¼; Mellanear, 4 to 4½; New Cook's Kitchen, 7¼ to 7½; North Busy, 3 to 4; Penhalls, 1⅛ to 1¼; South Caradon, 50 to 55; South Condurrow, 13¾ to 14½; South Crofty, 5½ to 6½; South Frances, 11⅛ to 11¾; Tincroft, 15½ to 16½; West Basset, 10¾ to 11⅛; West Chiverton, 4½ to 5; West Frances, 11½ to 12½; West Seton, 48 to 50; West Tolgus, 25 to 26; West Peevor, 4¾ to 5¼; Wheal Agar, 5½ to 6; Wheal Basset, 3 to 3½; Wheal Grenville, 5 to 5¼; Wheal Jane, 5 to 5¼; Wheal Kitty, 2¾ to 3; Wheal Peevor, 16 to 17; Wheal Uny, 1½ to 1⅝.

— Mr. J. H. REYNOLDS, Redruth (Nov. 20), writes—The Cornish Mine Share Market this week has not been quite so active, but prices generally have been fairly maintained. A large number of East Pools have changed hands at about 20 to 21. Annexed are the closing prices:—Carn Brea, 54 to 56; Cook's Kitchen, 3½ to 3¾; Dolcoath, 53 to 54; East Caradon, 3 to 3¼; East Lovell, 2¼ to 2¾; East Pool, 20 to 21; Herodsfoot, 2½ to 3; North Busy, 3 to 4; Marke Valley, 1¼ to 1½; Mellanear, 4¼ to 4¾; New Cook's Kitchen, 6¾ to 7¼; Phœnix, 2 to 2½; South Caradon, 55 to 60; South Condurrow, 13½ to 14½; South Crofty, 6½ to 7; South Frances, 11¼ to 11¾; Tincroft, 16 to 16½; West Basset, 10¾ to 11¼; West Chiverton, 4½ to 5; West Frances, 11½ to 12½; West Peevor, 4¾ to 5¼; West Tolgus, 25 to 27; West Seton, 50 to 52; Wheal Agar, 5½ to 6; Wheal Basset, 3 to 3½; Wheal Grenville, 5 to 5¼; Wheal Jane, 4¾ to 5¼; Wheal Peevor, 16 to 17; Wheal Kitty (St. Agnes), 2¾ to 3; Wheal Uny, 1½ to 1¾; Wheal Comford, 2 to 2½.

REPORTS FROM NEWCASTLE-ON-TYNE.

NEWCASTLE-ON-TYNE STOCK EXCHANGE.—Messrs. SPENCE and IRWIN, stockbrokers (Nov. 20), write—Bede Metal and Chemical Company shares have risen on a belief that the company is securing a stronger position for supply of ore, and are now in demand at 2 dis. Bolckows have improved about 2*l.* per share, and are now—A shares, 12 prem.; B, 37½. Consett Irons have not shared in the general improvement, owing to the strike at their platemills, but they are in strong demand at 12½ prem., and business has been done at 13 prem. Consett Spanish Ores fully maintain their late rise, and have been done to-day at 29s. per share. Darlington Iron shares, in spite of their having orders for a large amount of work, have not kept their price, being apparently pressed for sale by holders, who have been long waiting such an opportunity as the present; they are offered at 9 dis. Hopkins, Gilkes, and Co.'s shares are enquired for, on hopes that the concern may be taken out of liquidation, and 2*l.* per share is now bid. Palmer's Shipbuilding Company is well employed at present, and the A shares are enquired for at 23, and the B at 8½ dis. Skerne Iron Company: This company is also expected to be taken out of liquidation, and the shares are rising strongly in favour. The price to-day is about 3 to 5 per share. Dubby Syke Mine shares are slightly better, being enquired for at 6s. 6d.; sellers asking 7s. 6d. Green Hurth Mine shares are somewhat flatter, being offered at 4*l.* 17s. 6d. Hexham and Edmondbyers shares are in good demand on the rise in price of lead, which will enable the company to put its stock of ore into the market to a good profit; the shares are about par—25s. per share. Teesdale shares continue to droop in price, and are now offered at 6s. 6d. for the ordinary, the preference at 7s.

— Mr. J. STRAKER WILSON, stockbroker (Nov. 20) writes—The local market for Coal and Iron Shares still keeps firm, a further advance in quotations having taken place, with the exception of Darlington Iron shares, which are rather weaker. Bolckow, Vaughan, and Co., A shares, 11¼ prem.; ditto all paid, 120; B, 38. Consett Iron, 13 prem.; Consett Spanish Ore, 29s.; Darlington Iron, 6; Hopkins, Gilkes, and Co., 2; John Abbot and Co., 26 dis.; Palmer, A, 23; B, 8¼ dis.; Skerne Iron, 3; West Cumberland Iron, 7½ dis. Lead Mine Shares are rather weaker. Crook Burn, par; Dubby Syke, 7s.; Green Hurth, 91s. 6d. prem.; Hexham and Edmondbyers, par; Teesdale ordinary, 6s.; ditto preference, 7s.

GENERAL MARKETS.—In the absence of any fresh political rumours markets show renewed firmness. Business in foreign stock has been more active. Egyptians have advanced considerably, especially the Daira and State Domain Loans, hopes being entertained that at last Egyptian affairs will very shortly be settled on a satisfactory and firm basis. Turkish and Russian stocks have been in demand. English railways, though somewhat below the best prices touched during the week, still show an important advance all round, the principal rise being in "Dover, A," North British, North-Eastern, and Chatham Preference. The traffic returns were fairly satisfactory, though not so good as many sanguine speculators anticipated. American railways are dull. Erie shares, and Atlantic and Great Western, after being forced up to most extravagant prices, have had a heavy fall. Miscellaneous securities steady. The English funds are especially firm. Mines moderately so. Tin mines weaker, but lead and copper in demand —W. H. H. WATSON.—1 *St. Michael's Alley, Cornhill, Friday Morning, Nov.* 21.

BWLCH UNITED MINES—SPECIAL REPORT.

SIR,—I have this day, agreeably with your request, carefully inspected the above mine, in company with your manager, and herewith beg to tender you my opinion thereon.

The position of this mine in connection with other productive mines in the neighbourhood is so well known to you that any remarks of mine on this point are unnecessary.

Ritchie's engine-shaft is sunk to the 100, and a level extended east about 3½ fms in an oblique direction, and intersected the lode, which is about 3 feet wide, encased in a congenial stratum, composed of friable quartz, clay-slate, and a beautiful mixture of lead ore, especially so from the centre to the sole of the level, with every appearance of further improvement. This fact speaks well for greater depth, as I am informed you are many fathoms above the Goginan deep adit level. On reference to the sections I feel convinced that this discovery of ore is a continuation in depth of one of your western shoots so highly productive in the upper levels. The 80 fm level is extended east from shaft from 8 to 10 fms.; the lode is large, and impregnated with lead ore. My opinion is that you are on the eve of entering on a good run of productive ground, and I should strongly recommend the prosecution of this point with vigour. The 70 has been extended a great distance east from Ritchie's shaft, and is about meeting the line of a shoot of ore from the level above, in which there is productive stoping ground for silver-lead ore.

There are three or four trial stopes in the 60, which I have no doubt will leave a fair margin of profit on the working.

There are other interesting points which I need not at present trouble you with, but I have no doubt they will have attention at the proper time. The drawing and pumping machinery are in efficient working order, and are ample for your requirements. In looking at the recent important discovery of the ore in the deepest point of your mine, with the increased size of lode, it suggests itself strongly to me that depth only and extension of your levels is required to make this a permanent and lasting property, and, guided by my experience of the stratification and formation of the ore deposits in this and the neighbouring mines, I cannot but strongly recommend that the points enumerated should be prosecuted with the spirit they so well deserve

HENRY JAMES

South Darren Mine, Goginan, Aberystwith, Nov. 13.

THE IRON TRADE.—The Government of Canada has sent forward orders for iron rails, &c., to the extent of 60,000*l.* in value during the last few days, and many American orders are unable to be executed. The Pelsall Coal and Iron Company report that, notwithstanding the fact that lower prices for finished iron had been obtained than at any time during the past twenty years, they have within the last six months made a net profit of 2319*l.* The Darlington Iron Company (Limited) has just secured a good order for iron rails from the Indian Government to be laid down in Afghanistan, and the company has also inquiries for iron rails from America. It is believed that the reason why iron rails are ordered is that the steel rail works of the country are too much engaged to execute new orders rapidly. The company have started twenty puddling furnaces, and will add twenty more almost immediately, affording more employment than for some years past. A new steel works is being added to the company's plant.

SUPPLYING WATER TO STEAM-BOILERS.—In order to provide an effective yet simple and cheap apparatus for supplying water to steam-boilers, Mr. W. WATSON, of Harrogate, proposes to use a metal casing, which is coupled to the boiler at its upper end and above the water line by means of a tube or tubes, and at its lower end below the water line by means of a tube or tubes; also a pipe or other convenient source is provided for supplying the feed water to the apparatus. According to one arrangement of apparatus he provides within the casing a plug of a similar construction to that of an ordinary tap, such plug containing one or more passages through it, and to which he imparts when required a continuous rotary motion, or a rotary reciprocating motion, or a radial motion. By such motion the openings or passages in the plug are brought opposite to the various openings into the tube or tubes through the casing or box. When the passage or passages during their rotary or radial motion are brought opposite the water supply pipe they are filled with water, and continuing their course beyoud this position the filled passages are brought under the tube or pipe, which is connected to the boiler above the water line, and directly opposite the tube or pipe, which is connected with the boiler below the water line. When in this position the water falls from the passage in the plug into the boiler through the lower pipe or pipes. The plug after this moves again to the feed water supply, which immediately condenses the steam in the passage, and fills it again ready to be passed forward into the boiler.

PUDDLING AND MILL FURNACES.—Two or more gas generators (according to the size of the furnace) are, by the invention of Mr. J. H. BULLOCK, of Walsall, formed inside the ordinary fire grate of a puddling mill or air furnace by a divisional wall built perpendicularly between the back of the ordinary grate and the fire bridge of the furnace, from the bearing plate to the crown of the combustion chamber. The gas generators are fed with fuel through a hopper constructed on the top of the combustion chamber, and the gas is created by the fuel coming in contact with the divisional wall, which, forming as it does the back of grate or combustion chamber, and is sufficiently heated to distil the gas from the fuel. The gas finds its way into the combustion chamber through a number of apertures left in the divisional wall, and becomes ignited by the fire which lies upon the bars of the grate. The fire in the grate is fed through apertures left in the back plate of the furnace, and corresponding apertures left in the divisional wall. The ordinary fire hole of the furnace is built up so that no cold air can find its way into the combustion chamber. The grate is enclosed by an iron door, and the air necessary for driving the furnace is taken in at the chimney end and passes under the bottom of the furnace to the grate. The advantages derivable from the invention are claimed to be economy in the consumption of fuel, and any fuel that will not pass through a ⅜-in. mesh is large enough; improvement in the yield as no cold air can pass into the furnace until after the flame has passed over the fire-bridge, and then only through the hopper hole, and as the flame in the furnace is clear and constant a great deal of the loss which arises from oxidation when the ordinary grate is used is thus prevented; and that the work of the puddler is expedited and is rendered more pleasant and less laborious than when an ordinary grate is used; as there is no shovelling of coals required, the fuel being pushed into the grate by a small hook and the weight in the hopper keeping a constant supply at the apertures ready for use. The standing of the puddler is rendered cooler, and the unpleasantness of sulphur, flame or smoke issuing from the fire and staff holes is entirely prevented.'

IMPROVEMENTS IN PUMPS.—The invention of Mr. CHARLES TYSON, of Philadelphia, relates to force pumps, and comprises a piston formed with a valve seat and moveable on the piston rod which carries the valve, whereby by the ascent and descent of the rod the piston is shifted so as to open and close the valve, thus supplying the barrel with water and forcing it therefrom, a simple, inexpensive, and easily operated pump being thereby produced. It also comprises a force pump likewise adapted to replenish the air chamber with air when the prior supply therein is absorbed by the water. In practice he fits within the barrel a piston consisting of a suitably packed head or plunger fitted loosely on the piston rod so as to have sliding motions thereon to a limited extent. On the said piston rod is a valve formed therewith or secured thereto, and its seat is on the upper side of the said piston. The stem portion of the rod which passes through the piston is grooved or winged so as to leave passages between said portion and the piston, or, if desired, the said passages may be formed around the central opening of the piston. At or near the lower end of the rod there is a pin or stop fitted to or formed with the rod, for preventing displacement of the piston, and limiting the motions of the same at said lower end, the said pin or stop and the aforesaid valve being on opposite sides of the piston. The barrel may be submerged or provided with an inlet or induction pipe at or near its upper end, and an eduction pipe which leads to the place of service from the bottom of the barrel.

NEW PROCESS OF TREATING ORES.

The essential features of the process for treating ores invented by Mr. T. H. MANNING, of Butte, Montana, are to crush the ore in the battery with hot water and salt, and as much bluestone as the amalgamator will not find to be injurious to the screens; then to run the pulp from the battery through an inclined revolving screen, which will take out all the water desired, and prepare the pulp to run to the pans at the proper thickness for amalgamation. The pans are 5½ ft. in diameter and 3 ft. deep, one above the other, or in steps, from the battery, arranged so that one pan discharges into the other continuously. The ore is not handled from the time it enters the rock-breaker, but kept in a continual move from the rock-breaker to self-feeder; thence to the battery; from there through the revolving screen into the first pan; from it into the next, and so on through each pan and into the settler. From the settler it runs into a large box that will hold (say) 5 tons of pulp, together with the water. The mill is provided with two of these boxes, and when 5 tons, or about that much, is collected in the box the spout from the settler is turned into the other box, and the one run full allowed to stand four or five hours, or until the water becomes clear. It is then conveyed by pipe or hose to a tank, from which it is pumped into the hot water tank that supplies the battery. This manipulation of the water makes a saving of nearly one-half the salt and a portion of the bluestone. This return water will sometimes get base, and it is sometimes necessary to precipitate the bases by using the corresponding precipitants once in three or four days; a batch of this water is let run off altogether, and replaced with fresh water.

The pans are of annular section, and the blades or wings therein are about 26 in. long by 7 in. wide and 1½ in. thick; they are set to meet the current of the pulp in an oblique manner, so as to prevent the pulp, when discharged into a pan, from sinking too fast to the bottom. The quicksilver in this process is introduced into the second pan from the battery, and is allowed to drop in continuously from a large quicksilver reservoir placed above the pan. The quicksilver never gets to the bottom of the pan and stays there in this process, from the fact that it is continuously fed into the first pan, and is continually running from the first pan into the second, from the second to the third, from the third to the fourth, and from the fourth into the settler, from the settler into the bowl at the bottom, thence into the strainer-bag; from thence the amalgamator, at his leisure, returns the quicksilver to the reservoir above the second pan, and removes the amalgam as often as necessary. The box at the tail race is provided with a shaft under the middle and a ratchet and lever at the end. As soon as the clear solution is drawn off the operator, by means of the ratchet, elevates one end of the box, introduces a 2-in. hose with water, and runs the contents of the box into the tail-race. The contrivance conveying the pulp from the battery to the revolving cylinder is of sheet-iron, and made with descent enough to empty the pulp on the middle of the revolving drum. This drum is constructed of a net wire cylinder, 14 in. in diameter and 10 ft. long; over this is drawn a sack of unbleached muslin, of medium strength or thickness as the ore under treatment may require. For ore of a soft nature carrying talc and earthy matter, the muslin should be very thin; for ores carrying heavy mineral and silica a heavier material should be used. The net-wire cylinder, together with the muslin sack drawn over it tight, is then inserted in a revolving drum. The drum is made of sheet-iron, a little larger than the wire cylinder, and on the inside is made fast ½ in. square iron or wooden bars, which are set in an irregular shape. Then the water is permitted to run around them and the outside of the muslin until it finds its way to the low end of the drum, where it is allowed to pass out and be returned to the heating tank to again pass through the battery. The screen thus revolving discharges into the pan. The construction of the pans is somewhat peculiar, so as to make more than the usual friction. With regard to silver ore the inventor claims that when it is fractured by the stamps, in the presence of a hot solution of salt and bluestone, it takes up chlorine from the salt instantiy; that it does it quicker and more effectually than at any other time; that the salt can be introduced into the ore for amalgamation; and that he saves from 10 per cent. to 15 per cent. more than any other way he can work ore by wet crushing and raw amalgamation.

SOFTENING ARGENTIFEROUS AND AURIFEROUS LEAD.

The process of desilverising auriferous and argentiferous lead according to the invention of Mr. A. MARIN-Y-GARCIA, of Aguilas, is conducted as usual by the introduction of metallic zinc or spelter into the fused lead after cleaning the bath from antimony, iron, and other impurities by discharging air under pressure into the bath. The compressed air is introduced into the lead pan by a metallic pipe vertically disposed in the centre of the said pan at a few inches from the bottom, and connected with a force pump which will deliver the air at a pressure of about 2½ atmospheres. The scums thrown up by the action of the air are the oxides of antimony and iron mixed with lead-oxide, and may be termed oxides No. 1. The introduction of zinc or spelter into the lead produces rich scums, which are alloys of lead, zinc, and silver, the proportion of zinc is one third approximately of the scums, and nearly the whole silver of the argentiferous lead is concentrated in them. These rich scums are subjected to the action of a blast of air by apparatus similar to that above described, and are converted into fine oxides of lead and zinc, the silver remains unoxidised, but intermixed in the whole mass. This oxidation must be thoroughly effected to ensure the complete success of the process. These scums resulting from this operation may be termed oxides No. 2. The lead which has given its silver to the rich scums or to the oxides No. 2 is contaminated with zinc, to remove which the metal is treated with a blast of air, as before described; the result will be, first, zinc scums which may be used for a new desilverising operation, and poor oxides of lead mixed with oxides of zinc, which may be termed oxides No. 3. The poor lead is cast into pigs, and is ready for the market as soft lead.

The metallurgical treatment of the three kinds of oxides must next be described The oxides No. 1 finely powdered are dissolved in concentrated vinegar (acetic acid, pyrolignous acid), the antimonial yellow oxide remaining in suspension, and leaving the silver, if any, in the bottom of the vessel. By filtration the antimonial oxide is completely separated, and there results a solution of acetate of lead. The oxides No. 2, containing nearly all the silver of the lead, are treated in the same way by a solution of concentrated vinegar, the same being actively stirred. The silver deposits on the bottom of the vessel; meanwhile the oxides of lead and zinc dissolve completely as acetates of lead and zinc in the same manner as in the precedent case of No. 1 oxides. The silver is collected in the form of a fine metallic gray powder, washed in clean water, refined in graphite crucibles, and moulded into ingots. The double acetate of lead and zinc is added to the acetate of lead obtained from oxide No. 1. With this operation the cupellation process is avoided with all its difficulties, loss of silver, and lead. The oxides No. 3, poor in silver, are subjected to the same treatment—*i.e.*, dissolved in concentrated vinegar separated into two products, some silver, which deposits in the bottom of the vessel, and the double acetate of lead and zinc. The silver is collected with the silver of the oxide No. 2, and the acetates are added to the other acetates.

The soft lead and the silver are, of course, the most important products, but Mr. Marin-y-Garcia also utilises the secondary products—that is, the antimonial oxide and the double acetate of lead and zinc. The antimonial oxide is a yellow pigment, a use for which will no doubt be readily found. The double acetate of lead and zinc can receive various treatments for its further utilisation. Thus by crystallisation sugar of lead can be obtained, and the mother liquor containing the acetate of zinc can be treated for white zinc by precipitating the metal with carbonate of soda, or the liquid may be treated

with carbonate of soda, to obtain white lead with some zinc white in it. The carbonates of potash and lime give the same result, but as the acetate of soda is the matter out of which the acetic acid is generally extracted it seems preferable to use the carbonate of soda. The result of the precipitation by the reactive is acetate of soda, which will be crystallised; it forms a commercial salt to be sent to market.

IMITATION RUSSIAN PLATES.

A novel mode of polishing and forming a fast enamel on plate or sheet iron or steel, to give it a fine smooth surface and an enamel which will not break off when bent, thereby preventing rusting or corrosion when exposed to the air or dampness of any kind, has been invented by Mr. ALBERT MALTBY, of Pittsburgh, U.S., and consists substantially of de-oxidising the sheets or plates, annealing them in an air-tight compartment or box, rolling them while cold to the desired gauge, coating them with oil, and re-annealing them in an air-tight compartment; and finally, polishing them between rolls or in any other suitable manner. He takes plates or sheets of iron or steel of the proper guage, the gauge being determined by the thickness of the finished plate or sheet to which it is to be rolled. These sheets are then de-oxidised by subjecting them to an acid bath, or by means of a blast of hot air, or any other process known to those skilled in the art, thus removing the scale and leaving a pure metal surface. They are then placed in an air-tight compartment, and annealed by being raised to the proper heat in the usual method of annealing iron and steel, and are allowed to cool until below the heat at which they will oxidise in the air before the removal from the air tight box. The annealing of the sheets makes them soft and ductile, so that they may be rolled down to the required gauge. The cold sheets are then rolled down between suitable rolls to the proper gauge for the finished sheets, thus forming a smooth surface, perfectly free from imperfections and scale.

This cold rolling while forming the perfect surface on the plates and sheets will also harden them and render them too stiff for many purposes for which they are required. To remove this they are again annealed, the sheets being first coated with oil or grease in any suitable way, and then placed in an air tight annealing compartment or box and brought to a low heat. The second annealing renders the sheets soft and ductile or pliable again, removing the hardness and stiffness, and giving the sheets an exeeedingly fine blue colour, so much desired in sheet metal. The sheets are again allowed to cool below oxidising heat before removal from the annealing box, when they are ready for polishing. The plates and sheets thus treated may be polished either between rolls or by friction applied to the surface by other methods. When it is desired to form a mottled surface on the sheets, such as that of the Russia sheet-iron, they are rolled or passed between soft metal rolls, which gives the sheets a high polish, and at the same time the large grain of the soft metal rolls press into the sheets and give to them the desired mottled appearance. Where a fine smooth surface is desired the plates or sheets are rolled between hard chilled rolls, which give a fine smooth polished surface. The sheets may also be polished by friction applied in any other suitable way.

MANUFACTURE OF IRON.

With a view of producing economically, without puddling, and from material not hitherto applicable for the manufacture of Bessemer metal, an iron specially grained and homogeneous, and also suitable for the manufacture of steel, Messrs. MARTIN and CORDIER, of Paris, have patented a process which promises to be of considerable value. After having analysed a sample of the casting for ascertaining the quantity and nature of the metalloids to be expelled, they purify it by means of a second fusion in any kind of cupola, in which they have previously put about 50 kilogrammes of coke or charcoal immersed in a concentrated solution of chloride of sodium, or in a hydrocarbon, as the case may be. If the analysis reveals nothing but the existence of sulphur they add to 100 kilogrammes of casting about 200 grammes of slack lime, with a solution of chloride of sodium. When, on the contrary, the analysis indicates the presence of arsenic they introduce hydrogen from a gasometer. This gas passes into this cupola, and forms with the arsenic arsenious hydrogen, which is volatilised. If the analysis indicates the presence of phosphorus they add with the sodium lime above named from about 100 to 500 grammes of litharge to 100 kilogrammes of casting, according to the proportions of phosphorus to be carried off.

On leaving the cupola the casting thus purified and collected is sent directly into a Bessemer converter arranged in the ordinary manner; the necessary air for its feeding is furnished either by any kind of blowing machine combined with a regulating reservoir and accumulator of pressure, in which the air is compressed to two or three atmospheres, or by preference in a special apparatus, and which is composed of reservoirs of air compressed to 30 or 40 atmospheres, with the addition of a detainer of pressure of any description which distributes the air under a suitable volume and pressure with perfect regularity. Into 1000 kilogrammes of purified casting introduced into the converter they cause to pass from 30 to 35 cubic metres of air-blast.

The decarburation takes place in an interval of 8 or 10 minutes, and they thus obtain in pouring it out into the ingot mould an iron sufficiently pure and homogenous for being wire drawn without passing it through the puddling, but being simply reheated, rolled, or hammered, according to the use to which it is required. If, on the contrary, the metal which they wish to obtain be ultimately used for the manufacture of steel or moulded pieces instead of working by the Bessemer process—that is to say, instead of adding some spiegeleisen or ferromanganese into the converter they previously project into the cupola an oxide of manganese chemically pure, and effect the decarburation by the converter as above described, but only sending 20 to 25 cubic metres of atmospheric air under pressure.

Again, in order to avoid a too rapid decarburation, which would not allow a sufficient time for the refining, they introduce some carbonic acid gas at the same pressure as the air, and they intercept the arrival of the air. This carbonic acid gas is decomposed into two equivalents of oxygen and one equivalent of carbon, which is fixed, and permits the refining by purifying the metal. Nevertheless, through introducing the carbonic acid gas they can at the same time allow the atmospheric air to arrive at pleasure, so as to obtain a fixed current of carbon on the metal. The casting thus refined is in a high degree fit for the manufacture of steel of every quality, whether one cements the granulated iron obtained or mixes with the liquid casting in the same converter some Bessemer scrap-iron with old rails of same or other metal proceeding from furnaces. The casting can, moreover, be transformed directly into steel by the injection in suitable proportions of carbonic acid or carbonic oxide or of nitrogen. This casting forms excellent malleable iron for moulding purposes.

RAILWAYS AND TRAMWAYS.—In the construction of tramways, &c., in order to secure the rails to iron sleepers and dispense with detached or loose parts, Mr. JAMES LIVESEY, of Victoria Chambers, Westminster, secures a rail by means of three clip pieces, two of which are fixed on the outside of the rail at some distance from each other, and the third is applied to the inside of the rail midway between the outer clips. This third clip is made to turn partly round so as to allow the rail to be taken out and in, and has on one face next the rail a flat part which when in position is parallel to and abuts against the bottom flange of the rail; this flat part prevents the clip from being turned by vibration of the road, but by using a key or spanner it may be turned, as the rail will yield or bend sufficiently in the distance between the two outer clips to allow the square angles of the flat part to pass.

SALE OF CHINA-CLAY AND TIN WORKS.—At an auction, held by Mr. William Hancock (of the firm of Hancock and Sons) at the White Hart Hotel, St. Austell, on Tuesday last, there was a large attendance of clay merchants and others interested operations in the county. Considering the company who were present the biddings were very dull, although the prices ultimately realised were what was generally considered fair figures; 3-36th shares in the Minear Down Tin Work, in the parish of St. Austell, and the same shares in excellent machinery on the work, were purchased by Mr. Robert Pascoe at 182*l*. One-quarter share in the Tregargus and Treveor China Stone Quarries and China Stone Grinding Mills, in the parish of St. Stephens-in-Branwell, and the like share in the plant, materials, and china stone on the works was knocked down to Mr. Jacob Olver for 140*l*. The highest bid for the Savath Clay and Ironwork was 250*l*. only, and therefore this lot was not sold.—*West Briton*.

The following report was received too late for insertion in its proper place:—

EAST DARREN.—Nov. 19: In the 104, east of cross-cut, the lode is broken up and disturbed by a cross-joint dipping east, and at present unproductive. In the winze sinking under the 92, west of cross-cut, the lode is 5 ft. wide, containing little ore throughout, saving work for dressing of a low quality. In the 80, east of cross-course, near Taylor's shaft, we have communicated to the rise, in which the lode is 8 ft. wide, yielding 1 ton of lead ore per fathom; and we shall now strip the lode down to full width, preparatory to driving westward. In the cross-cut south at the 44, opposite Loveden's shaft, the ground is composed of blue clay-slate, branches of carbonate of lime, and beds of grit, letting out a little water. The stopes and tribute pitches throughout the mine are without change to notice.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Nov. 14	Minera	50	£12 8 0	Panther Lead Co.
—	ditto	50	12 10 6	ditto
—	ditto	50	12 13 0	ditto
—	ditto	60	12 13 6	ditto
—	ditto	40	12 13 0	ditto
—	ditto	7	12 10 0	ditto
20	East Roman Gravels	25	11 11 6	Adam Eyton.
—	Pant-y-Mwyn	20	11 0 0	Runcorn Smelting Co.

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Nov. 14	Minera	41	£ 5 6 6	Kenrick and Sons.
—	ditto	41	5 6 6	Vivian and Sons.
—	ditto	38	5 3 0	Dilwyn and Co.
—	ditto	67	5 9 6	Vivian and Sons.
—	ditto	47	5 9 6	ditto
—	ditto	30	5 0 0	Dilwyn and Co.
20	East Roman Gravels	20	4 14 6	Villiers Spelter Co.

COPPER ORES.

Sampled Nov. 5, and sold at the Royal Hotel, Truro, Nov. 20.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Great Consols	111	£1 17 0	South Caradon	59	£10 14 6
ditto	109	1 15 0	ditto	54	11 5 6
ditto	94	1 12 6	Gunnislake (Clitters)	93	3 5 6
ditto	90	1 12 6	ditto	91	3 16 6
ditto	88	1 12 6	ditto	76	3 16 6
ditto	86	7 2 6	ditto	60	4 18 6
ditto	84	1 19 6	Marke Valley	84	3 4 0
disto	77	5 13 6	ditto	55	3 11 6
ditto	76	1 14 6	ditto	41	3 14 0
ditto	70	1 15 0	ditto	40	4 5 0
South Caradon	87	4 3 0	Glasgow Caradon	59	4 9 6
ditto	85	4 4 6	ditto	51	4 11 0
ditto	80	4 11 0	ditto	50	4 9 6
ditto	65	5 10 0	Bedford United	64	5 4 0

TOTAL PRODUCE.

Devon Great Con.	885	£2307 6 6	Marke Valley	220	£ 787 2 6
South Caradon	430	2683 6 0	Glasgow Caradon	160	719 16 6
Gunnislake (Clit.)	320	1238 17 0	Bedford United	64	332 16 0

Average standard ..... £103 5 0 | Average produce 6⅜
Average price per ton £3 17 6
Quantity of ore..... 2079 tons | Quantity of fine copper, 133 tons 10 cwts.
Amount of money £8069 4 6
LAST SALE.—Average standard... £94 1 0 | Average produce 7⅞
Standard of corresponding sale last month, £98 5 0 | Produce, 6⅝

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	296	£1074 1 0
Grenfell and Sons	290	518 12 0
Nevill, Druce, and Co.	261½	691 14 9
Williams, Foster, and Co.	559½	3017 2 5
Mason and Elkington	255⅔	853 0 2
Charles Lambert	416⅔	1914 14 2
Total	2079	£ 8069 4 6

NO SALE on Thursday next, November 27.

Copper ores for sale on Thursday week, at Tabb's Hotel, Redruth—Mines and parcels.—Mellanear 497—West Tolgus 248—East Pool 102—North Busy 53—West Seton 51—Carn Brea 49—Wheal Agar 16—Wheal Basset 7.—Total, 1023 tons.

MANUFACTURE OF STEEL.

In order to produce a quality of steel always uniform suitable for different changes with regard to special uses, the Société Française des Aciers, of Paris, proceed in the first place, without puddling, and before the fusion of the metal, to remove injurious metalloids and excess of carbon contained in the raw materials. They thus avoid a repeated and necessarily irregular mixture or dosing of the raw materials intended to be transformed into steel. This purification is effected by means of a current of hydrogenated carbonic acid, passing over the metals to be transformed, raised to a temperature of 1020° to 1110° Fahrenheit. The carbonic acid removes the metalloids and excess of carbon by becoming transformed into bi-carbonated sulphurous, phosphorous, or arsenious oxide gas, according to whether the materials operated upon contain sulphur, phosphor, or arsenic. The metals having been thus prepared the operation is continued by fusion by means of a special furnace heated with oxide of carbon, in which the Bessemer rails or bars are placed after a previous cementation in apparatus adjoining the furnace; then the product resulting from the fusion is refined by a determined injection of carbonic acid and nitrogen either simultaneously or alternately. When it is desired to produce cemented steel either to be utilised directly or to be mixed with cast-iron, in order to produce cast-steel, they make the iron bars to be cemented chemically pure by the process mentioned; then the transformation into steel is effected in cementing furnaces with continuous fire of suitable arrangement and form, and working at a low temperature.

The considerations which have led to the adoption of cementing furnaces with continuous fire can be readily explained. In ordinary cementing furnaces a chemical phenomenon is observed. The furnace becoming heated very slowly after charging the carbon contained in the cementing troughs or boxes becomes dry gradually by vapourising the hygrometric water and the finest parts of the carbon, so that when the iron to be cemented acquires the temperature at which these gases can produce a reaction in its molecules the cement is deprived of its essential cementing elements hydrogen, nitrogen, and so to speak, the essence of the carbon. Hence grave inconveniences are caused; the very slow carburation and at a low temperature of the surfaces of the iron to be cemented; this carburation takes place only for a very slight thickness of the metal; the necessity of heating vigorously and of attaining a temperature of more than 2000° in order to gasefy the carbon previously deprived of nitrogen and hydrogen which disorganises the arrangement of the molecules of the surface of the iron owing to the dilatation; lastly, the difficulty which the new cementing gases producing at this too high temperature have in penetrating into the body of the iron, the surfaces having already their pores closed by the combined action of the carbon, nitrogen, and hydrogen. The nitrogen and hydrogen disengaged by the cement are generally in too slight proportions in comparison with the carbonic acid. In order to remedy this they revivify the cement during the operation by means of intermittent injections of nitrogen and hydrogen gases, which serve as a vehicle to the carbon in the pores of the metal. These considerations have led to the addition to the furnace intended for the fusion or melting of the steel of two other furnaces, which they call preparing furnaces. They can also use separately, while adopting the same principles, a cementing furnace with continuous fire deprived of its melting furnace for treating directly iron bars, old Bessemer or other rails, intended after cementation either for immediate industrial use or for melting in the melting furnace. This arrangement is hereinafter referred to.

The furnace is composed of three principal parts; first, the preparing furnace for the original material; secondly, a melting chamber; and thirdly, the finishing furnace for the refining of the steel obtained by melting. The furnace is fed from a suitable gas holder. The oxide of carbon produced by the gas generator is conducted by channels into a chamber; from this chamber the oxide of carbon passes through a number of flues made in the thickness of the arch of the melting furnace and extending into another chamber at the back in which the oxide of carbon becomes combined with atmospheric air. This air enters a channel through a grated opening made in the front of the furnace and passes along this channel and under the furnace until it reaches a chamber below the oxide of carbon chamber. It afterwards passes from this chamber through a number of flues into the upper chamber, where it combines with the oxide of carbon. These two gases thus combined can be ignited in the chamber, and the current of the flames after having heated the melted furnace follows a channel which leads it into a compartment under the preparing and finishing furnace. In this compartment the flames divide into four branches, and issue respectively by two sets of six flues at the right, and two other sets at the left, after having heated the lower arches of this furnace. In rising into a middle compartment a portion of these flames heats the vertical sides of the channels through which the oxide of carbon and the atmospheric air pass, and these become heated therein and acquire a temperature of about 300°. Another portion of the flames in rising to the middle compartment heats the vertical sides of the compartments of the finishing furnace, in which are two cementing troughs, while in the middle compartment the flames heat the top of the cementing troughs and also the underside of retorts and a heater, hereinafter described; then they pass into an upper compartment by flues at the right and left; they thus heat the top of the retorts and the sides of the said heater, and then they escape by passages into a flue from which the gases arising from the combustion are conducted into a suitable chimney. The arrangement of cementing furnace without a melting furnace differs from that already described only in the absence of the melting furnace, and the arrangement of the heating channels and of the fireplace required for direct heating by a suitable fuel. This heating may be effected as before with oxide of carbon. The arrangement includes the cementing troughs and heater previously described for supplying nitrogen, these being put into communication by the same arrangement of pipes.

MANUFACTURE OF IRON AND STEEL.

In working those grades of iron and steel which are reduced to a fluid condition in being converted directly or indirectly from pig-iron, Mr. E. WHEELER, of Philadelphia, proposes to use a malleable metal casing of a shape adapted to the form of product required. The thickness of material of which the mould is made must be determined largely by the nature of the product. In any case the material must be strong enough, and the joints, angles, or corners of the mould must be tight enough, to retain the molten contents, not only when they are poured into the mould, but also during subsequent treatment or working. One end or side of the mould should be made removable for the purpose of filling, or in lieu therof a suitable opening should be made in one of the sides or ends of the mould. If a product is required having substantially a uniform quality throughout, the mould is filled with the desired metal while the latter is in a molten condition by pouring or in any other convenient way. It is not essential that the mould be filled at one pouring, or while all the contents of the mould are molten, the metal, for instance, may be poured in from time to time, until the desired quantity is obtained.

If it is desired to mix a certain proportion of iron or steel, whether fibrous or cast with homogeneous metal, it may be first arranged in the mould as desired, and the molten metal poured in so as to fill the interstices between the solid portions and complete the filling of the mould to the extent desired, or the mould may be partially filled with metal of one grade, and metal of another grade be subsequently added, thus forming an ingot in which different grades of metal are arranged either miscellaneously or regularly in separate layers or divisions, the arrangement depending upon the character of the product required. When thus filled, the opening in the mould is closed by any suitable cap, cover, or stopper, the latter being secured by rivetting, welding, banding, or otherwise, so as to confine the contents of the mould during subsequent working. The mould and contents are then placed in a suitable heating furnace and raised to such temperature that the homogeneous or cast portion of the contents shall be either in whole or in part in a state of fusion or semi-fusion. This can readily be done without destroying the form or shape of the mould or casing, since the degree of heat at which wrought iron fuses or becomes liquid is much higher than that at which homogeneous iron fuses, and still higher than that at which steel fuses. In the operation the mould or casing operates substantially as a crucible retaining the contents and excluding the air.

RAILWAY CHAIRS.—As railway chairs for reversible and non-reversible rails are at present constructed the rails are secured therein by means of keys driven home in a direction parallel with the rail. These keys or wedges continually get loose, and often fall out, thereby loosening the rails, and making it unsafe for passing trains, and also necessitating the employment of labour to tighten and replace them. Messrs. YOUNG, POWELL, and WHITAKER, of Wrexham, have invented a method to obviate these evils, which consists in forming chairs in such manner that the key is driven in perpendicularly from above, that is, with its axis at right angles to the rail. One cheek of the chair is made so as to fit the contour of the rail, and the other of a flat surface, slightly inclined, and with two projecting ribs to hold the key laterally. A filling up block is placed in the hollow of the rail, and between this and the cheek of the chain is vertically driven a wedge shaped key of iron or other suitable material, the key being placed on the inside of the rail; the pressure from the flange of wheels in passing over the rail and the weight of the key itself tend to tighten it.

HOISTING MACHINERY.—The new hoisting machinery for the Yellow Jacket shaft, now being constructed in San Francisco, will be surpassed by nothing of the kind on the Comstock. It will be a double-cylinder direct-acting hoist. Each engine will have a stroke of 8 ft., cylinders 28 in. in diameter, and will be of a non-condensing character. They are to work at a steam pressure of 120 lb. to the square inch, and at 50 revolutions per minute will have a piston speed of 800 ft. While hoisting from a depth of 4000 ft. each will exert 1500-horse power. A flat steel rope, 7 in. wide, ½ in. thick, and 4000 ft. long, will be used in hoisting. The Union shaft is now supplied with hoisting works, and will soon be furnished with pumping machinery superior to any now in use on the Comstock. The new pumping engine will be of the compound condensing style, the initial cylinder being 64 in. in diameter, with a stroke of 7 ft. The expansion cylinder is 100 in. diameter and 8 ft. stroke. It will have 8 strokes a minute and 136 ft. of piston speed in the same time, and will exert about 1500 horse power. It will operate a double line of 14-in pumps, having a stroke of 10 ft.

THE HOLLY BOUGH.—The issue and announcement of the Christmas annuals reminds us that we are approaching the commencement of another and it may from present prospects be hoped a more prosperous year; and the Holly Bough—the Christian Herald Annual (London: Lile and Fawcett, Fleet-street)—will certainly hold its own amongst the many similar volumes which will be inviting perusal. The opening story—Through the Flood, by the Editor (the Rev. J. Jackson Wray)—should alone secure an ample amount of patronage for the book; yet this is only one of many attractive little pieces of which the Annual is made up. Malcolm's Return, by Mr. W. Chisholm, is admirably conceived and well written; and The Two Bonnie Bessies and Arlington Towers are well worth reading—as, indeed, are most of the prose pieces, but the poetry scarcely deserves so favourable an opinion. The usual rules of versification are not departed from, but there is a want of that ease observable in the productions of those who are poets by nature. Taken as a whole, the Holly Bough is a very cheap shilling'sworth, and is of so high and healthy a tone, and so excellently written, that all who read it will be equally amused and gratified.

HOLLOWAY'S OINTMENT AND PILLS.—It is admitted by everyone who has personally tried these noble remedies for any eruptions, sores, ulcers, bad legs, &c., or who have witnessed their purifying and healing effects on others suffering from such maladies, that nothing more can be desired than these medicaments possess. The ointment relaxes the swollen muscles, diminishes inflammation, assuages pain, and even alleviates dangerous maladies which may have lasted for months, or even years. Holloway's excellent preparations are effective singly, resistless in combination, and have been recommended by patients to be sought as the alternatives when all other means of regaining health have failed. Their action is temperate, not violent, or reducing.

Mining Correspondence.

BRITISH MINES.

ABERLLYN.—John Roberts, Nov. 19: In the Valley cross-cut we have had some very nice spots of lead this week, and there are more veins of spar in the lode than there were. The large stopes are without any change, only they are widening as we go up, which makes it a little more difficult for working; the lode is now 4 fms. wide. We have taken down the lode in the stope on the shale at No. 2, which is not so rich for blende. It seems to be cut off by a flat or slide, but I think it is only temporary. We are expecting to hole the winze to the rise from No. 3 on Friday. There was more ground standing than I anticipated; I surveyed it again on Monday, and find that we have about 4 ft. more. The stone-breaker works exceedingly well; much lighter than when we first started it.

BLUE HILLS.—S. Bennetts, P. Vian, Nov. 17: A 42 fm. level is just being opened out from the bottom of the Blue Burrow shaft; the lode here is somewhat disordered by the junction of one of the downright lodes, and containing some low quality tinstuff. The lode in the 30 east end is improved, and is now worth 10*l.* per fathom. The stope in the bottom of the level west of the shaft is worth 6*l.* per fathom.

BODIDRIS.—H. Hotchkiss, Nov. 14: My report of yesterday informed you that we had taken down more lode in the 17 east, where the ore had improved. To-day we have had a few kibbles of the orestuff brought to hand, and it is the best seen here yet. Some lumps will weigh nearly 1 cwt., and the end, which is about 8 ft. high, contains a solid rib of lead ore from 8 to 10 in. wide; this will turn out (say) 3 tons per fathom, and has every appearance of continuing. I intend next week to put additional men here to work. We have finished cutting the new road on the surface, and are now putting a coating of stone alongside the tramway leading from the ore kiln to Meadow shaft.—Meadow Shaft: We shall have completed the rebricking, &c. of this shaft in the course of a week or so if the weather holds good.

Nov. 19: The following is the setting report for the ensuing month:—The 60 yards level to drive east on the Maes-y-pwll lode, by four men the month, at 180s. per fathom. The end is looking very promising, and contains a good quantity of blende, but no lead ore as yet, but there is every indication of ore ahead. The 30, west of new shaft, to drive on the run of ore, by four men, at 80s. per fathom. This end is turning out good leadstuff for the dressing-floors. The 17, east of said shaft, to drive on the dip of the ore, by six men, at 90s. per fathom. There has been nothing more done on the ore since the 14th instant, as the men have been busy timbering and putting in tramroad in this level. This work will be completed by to-morrow night, when we shall go to work on the ore again, when I expect it to further improve as we go on. The 45 cross-cut, to drive north, by four men, at 190s. per fathom. No further change here; water still coming out of the end, and laces of spar traversing the forebreast. Surface work going on regularly, and with as much speed as possible.

BWLCH UNITED.—N. Bray, Nov. 15: During the month we have completed the lodge in the 100, and extended the level from thence, and intersected the lode, as referred to in my letter of Nov. 6, so far as this drivage has developed it; it is 1 yard wide, and much stronger and more mineralised in the bottom than in the back of the level. This feature in itself looks favourably for deepening the mine as soon as expedient, and shall have my attention. The discovery in the 100 so far is exceedingly encouraging, and I shall be able to write more definitely as to its importance in a few fathoms driving. In the 70 fm. level, driving east of Ritchie's, the lode has opened up to full width of the level; it is composed of quartz in small cavities, killas, &c., with spots of ore, and letting out small feeds of water. I have for the time removed two of the men from this end to resume driving the 80, east of Ritchie's, where there is a very promising lode, with a long stretch of undeveloped ground ahead. The stopes in the 60 fm. level have just been cleared and in working order, and I will write you further on these points in my next- Referring to the matter of rock-drills, it is of the utmost importance that the 100 fm. level in particular should be extended as rapidly as possible, and if one of those machines could be applied to do the work efficiently it would be a great boon to our shareholders, and it would have my hearty co-operation to make it a success.

CLEMENTINA.—J. Roberts, W. Sandoe, Nov. 19: The bottom end north of engine-shaft is worth for lead just as we reported last week, about 12 cwts. to the fathom. The south end at this level is looking a little more kindly, and we expect it to do so as it gets nearer the run of ore ground. The stope at the 25 is without any change. The western end at this level is looking kindly, with a little lead in the lode. The roadside shaft is almost ready for drawing, and in a day or two we shall commence cutting a lodge at the 12 and prepare for sinking. As we stated last week, there is a nice run of ore ground gone down in the bottom of this level on the east of the shaft which will be drained and made available by the sinking of another lift, and we feel confident that when this is done it will give good satisfaction. We are making every effort to get around a sampling of lead as soon as possible.

COMBMARTIN.—J. Comer, Nov. 20: There is no particular change in the different points of operation since our report for the general meeting. The stope in the back of the 12 north, west of the winze, has yielded a beautiful pile of rich ore during the week; the stope is from 6 to 8 ft. long, and looking well. It contains a solid branch of fahlerz ore from 1 to 2 in. thick. In the adit cross-cut we have just intersected a branch dropping towards the lode; this branch is about 4 in. wide, containing flookan, quartz, with fine lead and mundic; judging from this I think the lode is near at hand.

CORNWALL GREAT CONSOLS.—Henry Miners, Nov, 17: The mine being drained I went underground on Saturday and carefully examined the workings, and have again great pleasure in informing you that everything in connection with the statement as to the value of the property is fully borne out by the fine masterly lode which presents itself both in the shaft and levels in different parts of the mine. The engine-shaft is sunk about 2 fms. below the 16 fm. level, making 18 fms. from adit, or 29 fms. from surface. The lode in the shaft is from 5 to 6 ft. wide, composed of peach, spar, and capel, and producing a fair assay for tin —a fine looking lode. The 16 fm. level has been extended abont 20 fms. west of shaft and 6 fms. east; lode from 4 to 5 ft. wide, of the same character as in the engine-shaft, and also produces good work for the stamps. At the deep adit the lode in different places has proved large, but in the ends or levels which have been extended both east and west of shaft for about 20 fms. each way, it is about the same size and character as in the shaft and levels below, and its yield will all do to be treated for tin. The mine has far surpassed my expectations prior to going underground, there being plenty of ore ground already laid open to keep the stamps at work for some time, from which tin can be produced, and men are now waiting to take on tribute as soon as we can put the shaft and stamp in working order, which can be done with a small outlay and in a short time. In conclusion, I must again repeat that from my own experience of mining I am justified in congratulating you in having obtained such a fine property, and do not hesitate to say, when looking at the locality in which the mine is situated, together with the fine masterly lodes running through the entire length of the sett, also the congenial strata in which they are embedded, that when the mine is developed the shareholders will be handsomely remunerated for their outlay. The engine is working admirably, and the men who have taken the tin leavings to work on tribute, I have no doubt will get good wages, with profit to the company.

CROOK BURN.—Wm. Vipond, Nov. 14: There is nothing new to report from here that I am aware of. When I was last there, on Wednesday, the men were still sinking and walling the shaft; they had about 10 ft. of wall to put on. They were in limestone at the bottom; they had got into this about 4 ft.

CWMYSTWITH.—Nov. 20: In the 15, driving east of Pugh's cross-cut, on the new lode, by rock drill, we have reached the junction of Michell's and new lode, and are now extending the level eastward on the new lode, which is rather poor, being somewhat disordered at the junction of the two lodes; this derangement we consider will only be for a short distance. The driving of Pugh's cross-cut, on Michell's lode, by rock drill, is suspended. In the 15, driving west of Pugh's cross-cut, on the new lode, the lode is 3 ft. wide, worth 15 cwts. of lead ore and 1½ ton of blende per fathom. Very little has been driven in this level, the men being engaged in stripping out the lode to full width east of the cross-cut. The stope in the side of the 15, east of Pugh's cross-cut, on the new lode, is suspended. Gill's lower level to drive west of No. 1 winze, on the new lode; lode 2 ft. wide, producing saving work for lead and blende, but not sufficient to value. Cross-cut to drive north of the Comet lode, at the middle level; ground favourable for driving. This cross-cut is started to cut and prove the new lode at a point about 40 fms. over where the 15 cross-cut cut it. In a stope over Michell's level, west of the new lode, the lode is 2 ft. wide, worth 16 cwts. of lead ore per fathom, and the ground favourable for stoping. In a stope over Michell's level, west of Long winze, on the new lode, the lode is 18 in. wide, producing 18 cwts. of lead ore per fathom. The stope in the back of Gill's upper level, west of western winze, in the new lode, is suspended. In a stope over Michell's level, west of western winze, the lode is 3 ft. wide, worth 15 cwts. of lead ore per fm. In a stope under Michell's level, east of eastern winze, on the new lode, the lode is 2 ft. wide, worth 16 cwts. of lead ore per fathom. A stope in the back of Gill's upper level, on the new lode, is worked out. In a stope in the back of Gill's lower level, west of No. 1 winze, on the new lode, the lode is 2½ ft. wide, worth 1¼ ton of lead ore per fathom. In a stope in Level Fawr, on copper lode, the lode is 10 ft. wide, yielding 12 cwts. of lead ore per fathom. In a pitch in the back of the 15, east of Kingside shaft, on Kingside lode and branches, the lode is 6 ft. wide, worth 2 tons of lead ore per fathom. A pitch in back and bottom of 25 over Level Fawr, on Kingside lode and branches, has fallen off in value during the past month, and is now poor, but further trials will be made. In a pitch in the back of the 15, east of Kingside shaft, on Kingside lode and branches, the men have unwatered about 2 fms. of their old bottoms, and the lode has improved, now worth 1½ ton of lead ore per fathom. In a pitch in the back of Kingside adit, east of Kingside shaft, on Kingside lode and branches, the lode is large, producing 12 cwts. of lead ore per fathom. In a pitch in the back of Gill's upper level, west of Gili's cross-cut, on the Comet lode, the lode is 6 ft. wide, worth 15 cwts. of lead ore and 2 tons of blende per fathom; for the blende the men are to have 10s. per fathom.

D'ERESBY CONSOLS.—J. Roberts, W. Sandoe, Nov. 19: There is more spar in the end and a little more water. With this exeeption there is no change to speak of since last week.

D'ERESBY MOUNTAIN.—John Roberts, William Sandoe, Nov. 19: At the No. 5 we have commenced to clear up the fork in the bottom of the sump to commence sinking. We do not know what stuff there is, but we do not anticipate that there can be much, so we expect to commence sinking a few days at most. The ore that we discovered in the side of the level still continues, but appears to be dipping down towards the Gorse shaft. We have, in order to open more ground for stoping away around the old sump, commenced sinking from the level down on the large chamber made by the old men. In this sinking the lode looks very well, and when we have opened some ground to give us a fair chance for stoping we anticipate raising good quantities of lead. The other points in the mine are much the same in appearance and value as we reported them last week. We are pushing on the dressing as fast as the scarceness of the water will admit.

DERWENT.—J. Morpeth, Nov. 20: Jeffries' Shaft, Middle Vein: The 95, east of this shaft, yields at present 16 cwts. ore per cubic fathom; the vein is 8 ft. wide. The two stopes following this end in the back are yielding 11 and 12 cwts. of ore respectively per fathom; average width of vein, 4½ ft. The flats over the same level are yielding 14 cwts. of ore per cubic fathom. Over the 93, west of shaft, the respective yields of the workings are 12, 10, 20, 15, and 12 cwts. ore per fathom; average width of vein, 3½ ft.—Sun Vein: This vein, in the 70, east of shaft, has a little improved; it is now 2 ft. wide, and worth 8 cwts. of ore per fathom.—Westgarth's Shaft, Middle Vein: The stopes over the 93, east of shaft, are producing 12, 17, 12, 15, 17, 26, and 20 cwts. ore per fathom respectively; average width of vein, 4 ft. The bargain, "rising and stoping," over the same level, 48 fms. east of shaft, is worth 23 cwts. ore per fathom (cubic); vein 8 ft. wide. The 74, west of shaft, is in more disordered ground, indicating our nearness to some caunter lode or strings. Drawing, dressing, and smelting all busy.

DUBBY SYKE.—Wm. Vipond, Nov. 14: I see no change to report in the sinking here, the vein or branch is still occasionally spotted with ore, and apparently the whim is very much as it has been. I may also say the same of the water. I expect Mr. Tallentire will about finish his contract next week.

EAST CRAVEN MOOR.—D. Williams, Nov. 20: The vein in the 54 north west has further improved, and is now worth 20 cwts. per fathom. A stope in the back of the level east of shaft is worth 20 cwts. per fathom. The 54 east of shaft has passed through another nip, and is now opening out most satisfactorily, being upwards of 12 in. wide, and and indicates that we are close to the second run of ore ground proved in the level above. Other points as last advised. Dressing and smelting vigorously proceeded with.

EAST LONGSTONE.—H. Harris, Nov. 16: The men are making good progress in driving; the ground is still favourable for driving. We have intersected some branches, and this shows we are nearing the great east and west lode. I find on examining the stuff from the branches a quantity of silver, samples of which I send you by train.

EAST ROMAN GRAVELS.—Arthur Waters, Nov. 20: No material change has taken place in the mine since my report of last week. We have to-day sold 25 tons of lead ore for 289*l.* 7s. 6d., and 20 tons of blende for 94*l.* 10s.

GAWTON COPPER.—George Rowe, George Rowe, jun., Nov. 15: The lode in the 117 east is 6 ft. wide, producing very strong sulphur mundic, impregnated with copper ore. The lode in the 105 east is producing 4 tons of mundic, with good quality ore per futhom. The lode in the stope in the bottom of the 105 fm. level, east of winze, is worth 9*l.* per fathom. The lode in the stopes in the bottom of said level, west of said winze, is worth 11*l.* per fathom. The lode in the stopes in the back of the 105 east is worth 10*l.* per fathom. The stopes in the bottom of the 95 east is worth 7*l.* per fathom. All other points are without change.

GREEN HURTH.—William Vipond, Nov. 14: Swan's Shaft: This is still in plate, and the water is about the same as it has been lately.—Vipond's Sump: The 30, south from this, is yielding fully 9 tons of ore per fathom; I never saw it look prettier than it does now, even when it was yielding more ore—we have a rib of solid ore in this 22 in. wide from the top to the bottom of the end, with soft famp on both sides. The 30 north is now yielding 1 ton of ore per fathom; this end is very hard towards the bottom, but is getting easier at the top part, and improving for ore.—Robinson's Sump: Still there is confusion in this—limestone in one end, and plate, famp, and soft veinstuff in the rest of the sump; a few feet more will bring us to the random of the other cheek of the limestone, when we shall probably have an improvement. We commenced with the delivery of the ore on Wednesday; I should like to have it off as quickly as possible, as we have hard frosty nights now.

GRIFFIN.—Charles Kneebone, Nov. 18: The engine-shaft will be squared ready to receive the lift to the bottom this evening, and I hope to get the bearers fixed and the pumps in place sometime on Friday, and the drawing shaft ready by the end of the week, after which we shall proceed to drive north-east across the quartzite into the Griffin lode. The lode in the 10 north for 2 ft. of its width is rich work for lead, and worth 2 tons of lead ore per fathom, with more lode standing on the west side; I have never seen a healthier lode, and I expect to report a further improvement when it is opened out to full size. The main adit level on the Griffin lode is without change; shale, intermixed with carbonate of lime, and spots of lead on the east side, and quartzite on the west side. The Cwm Llanerch adit is now in full course of drivage by two men; the ground is hard, with a dip to the north-west. The No. 1 stope over the 10 has been pushed up in one place to the intermediate level for ventilation, and we have good lead standing in both ends ready to stope to advantage when the stuff is cleared away. The stope on the east and west lode is without change; worth 10 to 12 cwts. to the fathom. The stope over the 10, south of shaft, is worth 1 ton of lead ore to the fathom. Saturday next being our setting-day I hope to let additional stoping ground above adit. We must complete our dressing arrangements without delay to enable us to treat the accumulating quantity of orestuff.

GUNNISLAKE.—W. Skewis, J. C. Seccombe, Nov. 19: The lode in the 224, east of the engine-shaft, is worth 4*l.* per fathom. The lode in the western end is poor. The lode in the 212, east of engine-shaft, is producing saving work for copper ore. In this level west the lode is worth 6*l.* per fathom. The lode in the 200, east of engine-shaft, is worth 7*l.* per fathom. The winze in the bottom of this level, west of engine-shaft, is worth 5*l.* per fathom. The lode in the 188, east of engine-shaft, is worth 6*l.* per fathom, and looking very promising for early improvement. The rise in the back of this level is worth 8*l.* per fathom. No change in the 188 cross-cut south to notice. The lode in the 176 east is worth 7*l.* per fathom, and looking very promising. The stopes throughout the mine are producing about their usual quantities of copper ore. We are making all the progress we possibly can with the new machinery. We sampled 320 tons of copper ore (computed), to be sold on the 20th inst.

HERODSFOOT.—P. Tenby, Nov. 20: The men engaged cutting down the new shaft below the 175 have just met with a part of the lode standing in the western side, and taking horse as it goes down; this I think is the same lode as we are sinking on below the 205, and the part we are opening on in the 190, south of the new shaft. This lode is fully 2½ ft. wide, producing good saving work for the dressing-floors; I shall be able to say more about its value in a day or two when again taken down. The lode in the engine-shaft sinking below the 205 is large and more irony, but not so leady, worth about 5 cwts. of lead per fathom. The 205 north is without any change. The four stopes in the back of the 205 south are of the same value as last setting-day. The 190, driving north on the western part, is a little improved, worth fully 7 cwts. of lead ore per fathom; this part is very bunchy. The two stopes in the back of the 190 south are still worth 12 and 15 cwts. of lead per fathom. Everything throughout the mine is progressing satisfactorily. The last two parcels of lead ore will all be delivered at Looe in a few days.

HINGSTON DOWN.—T. Richards, Nov. 19: I beg to inform you that the lode in the drivages, both east and west of the adit level south, is of the same promising character, containing capel, quartz, prian, and mundic, with a little grey and red oxide, green carbonate, and good stones of yellow copper ore.

LADYWELL.—Arthur Waters, Nov. 20: The lode in the adit level, south of new shaft, is yielding rich lumps of lead ore, and seems to be improving as we go forward. The 20, south of said shaft, is in a nice looking lode, producing stones of lead ore.

LLANRWST.—Robert Knapp, Nov. 20; We have commenced to take down the ode at the adit, east of Prospect shaft; so far it is looking well, I think fully as good as when last taken down, 2½ tons per fathom. I will, however, report more definitely next week of its actual value. At the 10 above the adit I am glad to state that the lode still continues good, yielding 2 tons per fathom. We are making good progress in driving the shallow adit. There are several fathoms to be driven at this level to reach the line of ore ground so productive at the levels below. I have much pleasure in stating that the mine at no previous period looked as well as it does now.

LOVELL.—J. Prisk, Nov. 19: The lode in the 40 fm. level end, east of Howman shaft, is 6 ft. wide, worth 10*l.* per fathom. The lode in the winze, sinking below the 40, is 6 ft. wide, worth 12*l.* per fathom. The lode in the stope in the back of the 40 is 10 ft. wide, worth 18*l.* per fathom. The lode in the stope in the bottom of the 30 is 10 ft. wide, worth 22*l.* per fathom. The mine is greatly improved in the last month, and we are now in a position to send a much larger quantity of tinstuff to stamps, and the quality is now very good.

MARKE VALLEY.—W. George, J. Stenlake, Nov. 15: We beg to hand you the following setting report:—To drive the 90 west, by six men, at 9*l.* 10s. per fathom; lode 1½ ft. wide, composed of quartz, mundic, and spots of copper ore. Here the ground continues a moderately favourable granite, such as with ordinary ventilation good progress would be made, and with the contemplated boring machinery fixed we have no doubt the result will be satisfactory, and we shall then have sufficient air to make other trials in this long drivage. To stope the bottom of 80, on south part of Rosedown lode, by four men, at 6*l.*, yielding 5 tons of ore per fathom. We have employed four men to clear some attle at the 80, in order to commence a stope there, which shall be reported on in usual course. To stope back of 50, by four men, at 4*l.*, yielding 3 tons of ore per fathom. We continue the two men in stripping down lode in back of this level, which is yielding some very good work. To rise in back of 40, by four men, at 7*l.* 5s.; lode yielding for length carried (12 ft.) 3½ tons of ore per fathom. To stope back of 40, by four men, at 3*l.* 10s., worth 3 tons. To drive cross-cut north at the 30, by two men, at 10*l.* 10s. To stope bottom of 30, by four men, at 4*l.*, yielding 3 tons. To stope back of 10, by four men, at 4*l.*, yielding 2½ tons. We have also set six pitches to twelve men, at tributes varying from 11s. 6d. to 13s. 4d. in 1*l.*

MELLANEAR.—John Gilbert, Nov. 19: The rise in back of the 20 fm. level, west of Gundry's shaft, is still producing ½ ton of copper ore per fathom, and some saving work for blende. The lode in the 40, west of shaft, is yielding 1 ton of ore per fathom, and some good stones of lead, and looking very promising for an improvement. I think we have cut the south-east part of the lode in the 50 cross-cut, west of shaft, from which we have broken some stones of ore, and shall be able to report its value in a day or two, when we have cut through the lode. The lode in the 60, driving east on the south-east part, is 3 ft. wide, and yielding 2 tons of ore per fathom. The lode in the rise in back of this level is 2 ft. wide, and yielding 1 ton of ore per fathom. The lode in the 70, west of shaft, is 3 ft. wide, and yielding 3 tons of ore per fathom. The lode in the rise in back of this level is 4 ft. wide, and yielding 2½ tons per fathom. The lode in the 70, west of shaft, driving east on the south-east part of the lode, is 3 ft. wide, and yielding 1½ ton of ore per fathom. The lode in the 80, west of shaft, is 5 ft. wide, and yielding 2½ tons of ore per fathom. The lode in the winze in bottom of this level is 4 ft. wide, and yielding 4 tons of ore per fathom. The lode in the 90, west of shaft, is 3 ft. wide, and yielding 1¾ ton of ore per fathom; this level must soon improve, as it is only about 4 fms. behind the winze sinking in bottom of the 80. The winze in bottom of the 90, east of shaft, is yielding 3½ tons of ore per fathom. The lode in the 100, west of shaft, is 5 ft. wide, and yielding 3 tons of ore per fathom, and letting out a large quantity of water, which makes it spare for driving. The lode in the 100, east of shaft, is 4 ft. wide, and yielding 4 tons of ore per fathom. The ground in Gundry's shaft is still very hard and spare for sinking. We shall sink about 3 ft. further and then commence to cut plat preparatory to driving a 110 fm. level. There is nothing new in any other part of the mine. We sampled yesterday (computed) 497 tons of copper ore.

MINERAL CORPORATION OF GREAT BRITAIN.—W. Bennetts. Nov. 20: HAFNA, HIGH HAFNA, and GREAT D'ERESBY: Our operations continue to progress favourably. There is nothing new to report this week underground at the higher mines. At No. 5, or Great D'Eresby deep adit (cross-cut to the Fuchaslas lode), the boring machines continue to work well, but the ground remains very hard, consequently our progress has been slower this week. By the appearance of the end of the adit this afternoon I think we shall make better progress next week. For four days working the adit has been advanced 1 fm 4 ft. 6 in. On the other four days we have been putting in tramroad and repairing.—Surface: We shall commence crushing with our large new crusher, and preparing for market the ores we have in stock on Wednesday next the 26th inst. All our other dressing machinery is in full working order.

MONYDD GORDDU.—J. G. Green, Nov. 19: All the ore has been shipped today, as per enclosed railway company's receipt notes. I cannot work out moisture in time for post, but will send the same to-morrow. There is no particular alteration in the mine. The 24 west has been very rich for the week—in fact, the richest ore I have seen in the mine. To-day a large vugh or cavity has made its appearance, and although the lode is very fine it is not so productive. This, however, will close in a few feet driving, and we shall have an improvement. We have had a light shower of rain, which has given us a small supply for crushing.

MORFA DU.—T. Mitchell, Nov. 20: We have no change here calling for any special remarks. The points in operation are being carried on in the usual regular order.

NEW CATHEDRAL.—Stephen Davy, Nov. 20: Since my last we have been engaged draining the mine with all possible speed, and having at the beginning of the week reached the 26 we thought it advisable before lowering any deeper to fix another set of bearers at the 20, and having fiuished the cutting of the ground for the same we are engaged in putting in the timber. This will be completed to-day, and we intend lowering the lift to the 30 to-morrow, and with fair progress shall reach the 30 against the end of the week, this being at present and for the last 10 fms. the largest excavation on the mine. We shall as soon as the plunger-lift is fixed be enabled to make better progress. We have also began the preliminary work for putting Robey's portable engine for winding purposes.

NORTH D'ERESBY MOUNTAIN.—Nov. 20: There is no change to notice since my report of last week. The lode is quite as good now as then stated.

NORTH HENDRE.—G. Ellis, Nov. 20: The vein of lead discovered in sinking the No. 2 shaft continues to improve, being now 18 in. wide, of nearly solid ore, extending across the shaft. The west workings from south main level still yield very good lead, averaging about 8 tons per fathom, and the No. 2 run continues to produce good ore. In the east workings south of east main level a very fine run of lead was intersected in fresh ground this week, and is now worth 6 tons per fathom. The ore in the stopes and levels south and east of the above is worth 12 tons per fathom. The mine throughout looks exceedingly well, and is likely to continue so. The new machinery on surface is working well.

NORTH PENSTRUTHAL.—William Polkinghorne, Nov. 15: We are pushing on with the sinking of Highburrow shaft with six men and three boys; the lode maintains its size (from 3 to 4 ft. wide), and composed of quartz and peach; from its present appearance we have every reason to believe that as we get further from the influence of the elvan we have just passed through it will become a productive lode for copper ore. The 88, driving west from Highburrow shaft, is extended from the shaft about 14 fms.; so far the lode has been disordered by the elvan course, but we are now getting clear of the elvan, and the lode is becoming more settled; in about 10 fms. further driving we shall reach a good run of copper ore ground seen in the 72 above. In the 46, driving east of Highburrow shaft, the lode is producing good work for tin; in about 5 fms. further driving we shall reach the winze sinking under the 34 above. In the winze sinking under the 34, east of Highburrow shaft, the lode is 4 ft. wide, yielding good work for tin; and when the winze is communicated with the 46 mentioned above it will lay open a good piece of tin ground, which can be taken away at a profit. The 46 cross-cut driving south from Highburrow lode is extended 66 fms., and we expect to reach the 40-ft. tin lode in about 8 or 10 fms. further driving; we have already intersected a small branch of yellow copper ore, as mentioned in my last report. We are pushing on this level as fast as possible with Jordan's hand-boring machine. Before commencing to sink the winze in the bottom of the 34, west of Highburrow shaft, the men had to clear away some debris, and put in some timber to secure the ground above, and make it safe for working; we shall commence to sink this winze on Monday. It will take about three months to hole this winze to the 46 below; when done it will lay open a piece of tin ground for stoping. We are putting on all the tribute pitches we can, in order to get as much tin as possible.

PANDORA.—H. Nottingham, Nov. 20: New Lode: In the 33 driving south we have a marked improvement in the lode; it is now yielding some very nice lead and blende, and likely to further improve. No. 1 stope, north of No. 1 winze, is worth 1½ ton of lead and same of blende to a fathom. In the 23 driving south the lode is producing nice stones of lead, but not regular. We have now resumed the sinking of No. 2 winze south, which is worth 15 cwts. of lead and same of blende to a fathom. No. 2 stope, going south over this level, is worth fully 15 cwts. of lead and 1 ton of blende to a fathom.—Goddard's Lode: The 33 driving south is making fair progress, but shows no change of character. Stope south of No. 1 winze is worth 10 cwts. of lead and same of blende to a fathom.—Surface: The weather continuing dry we have connected the engine for pumping, and are now making better progress on the dressing-floors, which we are keeping well supplied with stuff. We are also cleaning out our water-courses, and preparing for more water. The new crusher rolls have arrived, and shall watch for the best opportunity of putting them on.

PANT-Y-MWYN.—E. Parry, Nov. 19: The 15, driving east of Modlyn shaft, is in a very fine promising lode, composed of carbonate of lime, clay, sand, and stones of lead ore; we fully believe there is a good run of lead ore just before this end. Four men are tributing in the back of this level, at 50s. per ton, who have a very good pitch, and raising a large lot of lead ore; this is the run of ore we expect to have in the end soon—the lode here has much improved in character to what it is in the adit level. Six men are rising up on the lode at the point of the cross-cut, which is at present unproductive. We have begun to sink a sump in the bottom of the 15, east of Griffith's shaft, where the lode is 9 ft. wide, and rich for lead ore; we shall be better prepared to give the value per fathom next week when we shall have cleared the lode to the full width and length of the sump—this being the bottom of the mine it is very satisfactory to have a rich lode in the bottom for 40 fathoms in length. We sold 20 tons of lead ore last week, and hope to have 30 tons more for sale in a month from the date of that sale. We shall forthwith make all necessary preparations for deepening Modlyn shaft, and when we get the new engine to work upon it we shall make large returns. Tributers in this old portion of the mine have 4*l.* per ton, and are earning good wages. We have four men in the deep adit level from the mouth end, who have let off the water, and put the level in fair condition for 400 fathoms from the mouth towards this mine, and we have six men clearing and repairing the south shaft, who are down to within 3 fathoms of the adit, and we hope in the course of nine days to get into the adit here; we shall then push forward from both points until the two sets of men meet, as we believe the obstruction which ponds the water back in time of flood is between these two points—the opening of this level being of great importance we shall have it done as soon as possible, and will report progress made. Our prospects here, on the whole, are very good, and I think as the mine becomes better known to the public it will be more highly valued.

PARYS.—T. Mitchell, Nov. 20: We have cut another small branch of ore in the 90 south this week, and there are at present some small patches of copper appearing in the forebreast. The ground has eased a little, and during the last few days better progress has been made in the driving. The 90, west of cross-cut, is without change. The flookan continues regularly by the wall of the lode. The pitches are looking much as usual, and yielding fair quantities of ore.

PATELEY BRIDGE.—C. Williams, Nov. 20: The vein in the 40 west is producing 4½ tons of lead ore per fathom. The 40 east is worth 2 tons of lead ore per fathom. The 30 east is looking better, and yielding more metal, and the lode presenting a most favourable indication of speedy improvement. The 30 west is becoming highly mineralised, showing nice patches of spar intermixed with lead. Fielding's vein in the 20, north-west, has further improved, and worth today 2 tons of lead ore per fathom. No other change. I offered yesterday 29 tons 6 cwts. 1 quarter of pig-lead for sale, 25 tons soft, and 4 tons, 6 cwts. 1 quarter of hard lead. Messrs. Hutchinson bid 15*l.* per ton for the hard, and 16*l.* for the soft lead, or 464*l.* 15s. 9d for the lot.

PENHALLS.—S. Bennetts, P. Vian, Nov. 17: The lode in the 70 east end is tinny but small. The stopes in the back of this level are without much alteration. In the western part of the mine the lode in the 48 end is worth 6*l.* per fathom. Both the 50 and 30 north cross-cuts are being cleared out preparatory to opening out on the Wheal Betsy lode.

ROMAN GRAVELS.—Arthur Waters, Nov. 20: The new engine-shaft is down 16 fms. 1 ft. below the 110. The men will commence cutting plat, &c., preparatory to driving north and south on the lode on Monday next. The ends and stopes are yielding ore as per late valuations. We have to-day sampled 25 tons of blende, for sale on Thursday next.

SOUTH CONDURROW.—W. Rich, W. Williams, H. Abraham, Nov. 19: The lode in the 93 end east is worth 10*l.* per fathom. The 80 end east is letting out water freely; the lode is large, and is worth 11*l.* per fathom. In the 80, west of Plantation shaft, but little has been done, as the men are engaged in fixing skip-road below the 70. The lode in the 70 end west has a promising appearance, and is worth about 10*l.* per fathom. The 70, east of King's, is worth 7*l.* per fm. The 50, east of King's, is worth 8*l.* per fathom. The lode in back of the 50 east is worth 12*l.* per fathom. The 40 east yields low quality tinstone.

SOUTH DARREN.—Henry James, Nov. 20: Setting Report: The 110 east to drive by six men, at 9*l.* 15s. per fathom; in breaking the lode yesterday in this driving we found the rib of ore had become more contracted, and the lead mixed up with rock; appearances indicate that more lode and the richer part of it is standing to the north. The driving must be further extended, and the lode cut through to the north wall before it can be properly valued. The 110 west to drive by six men, at 9*l.* 15s. per fathom; the lode here is 3½ ft. wide, with a good mixture of lead and copper ores, worth 16*l.* per fathom; here again we have not cut through to the north wall. The 100 end west to drive by six men, at 8*l.* 15s. per fathom, is worth 2½ tons of lead ore per fathom for full width of the lode. No. 1 stope in back of this level by four men, at 3*l.* 5s. per fathom, is worth 2 tons per fathom. No. 2 stope by six men, at 3*l.* 5s. per fathom, is worth 1½ ton per fathom. No. 3 stope by four men, at 3*l.* 5s. per fathom, is worth 1 ton per fathom. No. 4 stope by four men, at 3*l.* 5s. per fathom, is worth 1¾ ton per fathom. No. 5 stope by four men, at 3*l.* per fathom, is worth 15 cwts. of lead ore per fathom. The 90 end to drive by six men, at 7*l.* 5s. per fathom, is worth for lead ore 1 ton per fathom. The winze sinking in this level by six men, at 9*l.* 10s. per fathom, is worth 1¼ ton per fathom. No. 1 stope in back by four men, at 2*l.* 15s. per fathom, is worth 1¼ ton per fathom. No. 2 stope by four men, at 2*l.* 15s. per fathom, is worth 15 cwts. per fathom. A stope in back of the 80 by six men, at 3*l.* 5s. per fathom, is worth 1¼ ton per fathom. A tribute pitch in back of the 50 by four men, at 8*l.* 10s. per ton for lead, and 30s. per ton for copper ores. A pitch in back of the 50 by two men, at 8*l.* 10s. per ton for lead and 30s. per ton for copper ores. A pitch in back of the 80 by four men, at 7*l.* per ton for lead and 30s. per ton for copper ores. A pitch in back of the 90 by two men, at 7*l.* per ton for lead and 30s. per ton for copper ores. The filling of the skips by three men, at 6s. per 100 skips. The tramming by six men, at 12s. per 100 skips. The landing by two men, at 5s. per 100 skips. The drawing off stuff by two men, at 6*l.* 15s. per month. Spalling of orestuff for crusher-mill by four men, at 10*l.* per month We sample on Saturday, for sale on the 28th instant, 50 tons of silver-lead ore.

SOUTH TOLCARNE.—Wm. Rich, J. Knotwell, Nov. 19: The ground continues to be favourable in the 36 cross-cut south, but we shall have to suspend the drivage for a few days in order that the men may put down a tramroad; when this is accomplished it will greatly facilitate the discharge of the stuff, and enable us to push on more rapidly. We hope to hole the rise in the back of the 36 in a week or two.

TANKERVILLE.—A. Waters, Nov. 20: Tankerville: No change to notice has taken place here since the date of my last week's report.—Pump Sump: This sump is now 23 fms. below the adit or boat level; the lode is worth about 3 tons per fathom. The new shaft from surface is down 8 fms. 4 ft.

TEESDALE.—J. Slack, Nov. 12: West-End Stope No. 1: This working still continues good—unmistakably better (because it is regular) than anything we have ever had before. It must have averaged somewhere between six and nine bings per fathom these last two weeks. I like it being as regular; it was quite as good to-day as last time I saw it, and had been so every day. There is lead ore enough to carry the whole mine on in this working.—West-End Stope No. 2 is still only poor, excepting at the very top of the working. I think it will not do more than pay its own cost till we get forward to where the better ore is standing. The east branch is only poor, though many times it has excellent ore in it. It is so very irregular that it is impossible to form a correct value of it. It is, however, not too hard to work, and will do something more than pay expenses. All other workings are temporarily suspended. Dressings are going on all right.

TEMPLE.—Nov. 19: A portion of the lode has this week been taken down in No. 2 level, and, as anticipated by the last report, a very decided improvement both in the appearance and produce may now be reported. Although a few feet only have been taken down the improvement is sufficiently decided to allow the produce to be estimated at 9 cwts. of lead ore per fathom, and there is every indication to justify the expectation that on breaking the next few fathoms the lode will be found still more productive. The lode is wider, and contains two leaders of lead, which appear to be coming together as they go west. There is no change to notice in the stopes, which are producing the average quantity of ore. Surface works are progressing favourably. The machinery is in good working order.

TYN-Y-FRON.—E. Jones, Nov. 18: We are still stoping in the second stope, west of the cross-cut, where the blende keeps on as well as ever; it will produce about 2½ tons to the fathom. We cannot say how much the lead will produce because it is not so regular as the blende, and will require to be dressed to ascertain its value.

— T. P. Thomas, Nov. 19: Our parcel of blende has produced 5*l*. 10s. per ton, delivered in trucks at Aberystwith. Considering it is undressed and in the rough as broken this is a good price, and shows the richness of the lode, and there is no doubt of our being able when our dressing-floors are complete to do as they are doing in Frongoch—selling 100 tons of blende, I think, per month, after getting out sufficient lead to pay all its cost for breaking and dressing.

UNITED VAN CONSOLS AND GLYN.—J. Roach, Nov. 21: In the drivage west of cross-course in deep adit level, although cubes of lead and a little quartz are occasionally met with, the ground is still disordered by the influence of the cross-course. I shall be able to speak definitely on this in two or three days hence. The 50, east of Murray's shaft, is being driven on south part of lode for dispatch; in cutting holes for timber we found ore in the face of the lode, which looks encouraging for our next cross-cut, which we shall soon be in a position to drive. In the 50 west, on the north part of the lode, we have some very fine slabs and a mixture of lead; this point is very promising. We have cut down the lode west of Murray's shaft for 4 fms. in length and 14 ft. in width, which is well charged with lead throughout; here, I think, we shall have stopes in the roof that will yield a considerable quantity of lead ore. The tributers are raising a greater quantity of ore than usual; one of the parties is earning extra wages. I shall send the 15 tons of lead sold to the smelter's to-morrow. We have now 7 tons of cleansed lead and about 20 tons more raised, which we shall lose no time in making marketable. Mr. Thomas was here yesterday, when we set the new 60-ft. wheel, rods, bob, &c., to work; and I have the satisfaction of saying that the whole machinery answers admirably. The mine is now being effectually drained thereby, which will considerably lessen our expenditure.

WEST CRAVEN MOOR.—D. Williams, Nov. 20: Blackhill adit level is now within a few fathoms of being under the perpendicular of the new west shaft; the vein in the present end is upwards of 2 ft. wide, composed of the usual matrix for producing lead ore in paying quantities. Other points as last reported upon.

WEST WHEAL TOLGUS.—Nov. 20: The following changes have taken place in the bargains since the report presented to the account meeting held on Monday last:—The lode in the 155, west of Taylor's shaft, has improved to 1 ton of ore per fathom. The ground in the 135 cross-cut south is a little better, and we shall continue the driving far enough to be satisfied that we have left no part of the lode undiscovered. The 125, east of cross-cut, on the south part, is improved to 3½ tons of ore per fathom. There is no change in any other part of the mine. We sampled on Tuesday copper ore computed at 248 tons.

WHEAL CREBOR.—John Goldsworthy, Nov. 18: Agreeably with your request, I have this day carefully inspected the above-named mine. In the 120 fm. level, west of communication, the lode is large, the ore part being 12 ft. wide, worth 70*l*. per fathom for copper ore, and has a good appearance. The lode in the 120, east of communication, in the part now being taken away is worth 60*l*. per fathom. The south part, which has been taken away, was a fine course of ore. The 108 east, on the main part of the lode, has a favourable appearance, and indicates an early improvement. The change on the south wall is similar to that in the 120, by the side of the present course of ore. In the 108, on the south part, east of the cross-cut, the lode is 4 ft. wide, showing indications of an early improvement; present value, 20*l*. per fathom. The stope in the back is a fine course of copper ore, worth 80*l*. per fathom. The stope below the 108 looks well, and is worth 20*l*. per fathom. The stopes in the back of the 108, on the main part, are without change to notice since I last saw them. I find there are men placed in the 72 repairing road, &c., prior to driving the end. In the 48, on the north side, and almost under the new shaft, the lode in the lower part of the level is producing some good copper ore, averaging ½ ton per fm.; here the lode indicates favourably for depth. In the 48 south cross-cut east there is little change, as but little is being done. I consider this cross-cut to be a most interesting point, judging from what has been seen going off on the south side of the drivage. With the ore taken to quay, and the quantity now in course of dressing, broken, &c., I think the next sampling will exceed 400 tons.

WHEAL CREBOR.—J. Andrews, Nov. 18: The 120, east of cross-cut, is still worth fully 80*l*. per fathom. West of cross-cut at the same level the lode is worth 70*l*. per fathom. There is little or no change in the 108 east. The stope in the back of the 108 east is worth 10*l*. per fathom. The new lode at the 108, east of cross-cut, has slightly improved, and is now worth 20*l*. per fathom. The new lode in the stope in the back of the 108 is worth 40*l*. per fathom. We have resumed the driving of the 72 east by four men, but as yet there is no change in the lode. In driving south at the 48 we meet with spots of copper, but no lode has yet been met with. There is no change in the new shaft.

WHEAL UNY.—W. Rich, M. Rogers, Nov. 17: The 172 end, east of Hind's shaft, yields low quality tinstone; the same remarks will apply to the 172 west. The rise in the back of the 172 is worth 9*l*. per fathom. The ground is stiff in the 172 cross-cut south. The lode in the 160, west of incline shaft, is worth 9*l*. per fathom. We are cutting through the lode in the 160, east of Goodinge's shaft. The 130 end, east of King's, carries stones of tin. We have not yet cut through the south part of the lode in the 130, west of incline shaft; the ground is very hard.

WHEAL GRENVILLE.—T. Hodge, Nov. 20: Goold's shaft is about 4 fathoms below the 165. The 165 east end is looking more promising, and we are daily expecting a good improvement here. The rise in back of this level is up 6 fms., the lode in which is worth fully 10*l*. per fathom. The 150 east end is worth 10*l*. per fathom, and likely to improve; ground driven during the past four weeks 9½ fathoms. The rise in the back of the said level is worth 8*l*. per fathom. The 140 east end is worth 8*l*. per fathom. No other change.

FOREIGN MINES.

RICHMOND CONSOLIDATED.—Telegram from the mine at Eureka, Nevada: Week's run, $43,000, from 743 tons of ore. Refinery, $40,000. Mine looking well.

— R. Rickard, Nov. 28: Since my last explorations in the mine have been carried on vigorously and with very good results. The 200 main drift has been extended 13 ft. in very favourable ground for ore, and the present end is in limestone and bunches of low-grade ore. The 200 western drift haa been extended 15 ft. in very favourable looking ground. Below the 200 a winze is being sunk in the ore body discovered by the raise from the back of the 400; this winze is now down 30 ft. in very good ore, showing a total depth of ore of 45 ft. A drift is now being driven from the bottom to intersect the cave for ventilation and convenience for working. The 400 quartzite drift has been extended 29 ft. without any change to mention in the ground. The 500, drift west from the No. 12 chamber, has been extended 15 ft., and the ground is not so hard as it has been; it is more broken, and shows better indications for ore. The 500, north from the No. 12 chamber has been advanced 15 ft. in very good ore, and the present appearance of the ore (end ?) promises to open out to a good chamber; the ore is of good quality and very compact.. The rise from the No. 13 chamber has been put up a total distance in ore of 95 ft., the ore varying in width from 2 to 5 ft. At the top of the rise it appears to open wider, aod there is a prospect of getting a large chamber of ore in this ground. The winze sinking below the 600 from the bottom of the 13 chamber is down 30 ft., and the south end is in good ore, and looks very promising. The 600 main west drift has been extended 25 ft. without any material change in the ground. No. 14 chamber, in the back of the 630 west drift, is opening out very well, and as far as opened it shows the ore 25 feet to 30 feet, with ore still in the end; how far it will extend we cannot yet say. Drifting has nowbeen resumed from the top rise in a westerly direction, and the end of the drift is in good ore. No. 1 winze sinking below the 600 from north fissure drift is down a total depfh of 36 ft., and the ground in the bottom is more favourable. No. 2 winze sinking from the same level is down 9 ft., with very favourable indications for ore. The 800 west drift has been extended 1 ft., and the present end is in hard limestone. The 900 west drift has been advanced 19 ft., without any change to mention in the appearance of the ground. The winze sinking below the 900 is down 14 ft. in broken ground, with ledge matter in the bottom. The machinery both in the mines and smelting-works is in good working order. The furnaces are doing good work, and smelting large quantities of ore. The No. 1 furnace smelted last week an average per diem of 91 765·1000 tons. The No. 4 is smelting refinery by-products.

FRONTINO AND BOLIVIA (Gold).—The directors have received advices from their agent dated Sept. 11, accompanied by a remittance of gold valued at 4095*l*. The accounts for August show:—1619 tons of ore produced 1550 ozs. of gold (average 19 dwts. 3 grs. per ton); gold bought, 205 ozs.=1755 ozs., value 4095*l*. Cost at the mines at Medellin and in London, 2340*l*. 5s.; cost of gold bought, 394*l*. 17s.=2735*l*. 2s.: profit, 1359*l*. 18s. In addition to the above cost of 2340*l*. 5s., the sum of 566*l*. has been spent on capital account. The accounts for the month of August, which arrived by the mid-monthly mail, are all very satisfactory. They will be printed and sent out with the accounts for the month of September, which will arrive in a few days. The accounts show that both in Silencio and Palmichala the profit is made entirely from ore taken from the ends and the shafts. There has been no stoping in Silencio; half the gold comes from the lowest level (the 103 ft.), showing that the lode holds down in depth. The heavy cost is due to works which Mr. White says are works of development.

EBERHARDT AND AURORA.—F. Drake: Progress report for week ending Oct. 25:—Eberhardt and Aurora Tunnel; Distance run to Oct. 18, 4416 ft.; run for week ending Oct. 25, 46 ft.; run for month of October, 171 ft.; distance run to Oct. 25, 4462 ft.—Remarks: During the week we have passed through some open seams standing nearly vertical, and crossing the line of tunnel at about 30° north. In the seams we find no clay or spar indicating any movements or slip. All the lime rock has been greatly shattered and broken, as we find innumerable small spar seams running through it in every direction. The general pitch of the rock is slightly to the west, but we do not find it in regular layers as we do in the shale through which we have passed. The character of the lime is the same as we have on the surface of the hill in which we had our ore bodies. I am greatly encouraged that by continuing the tunnel we will come upon ore.

RUBY AND DUNDERBERG CONSOLIDATED.—The reports from the secretary at Eureka received during the week are to the following effect:—"The foreman reports that the cleaning up of the Dunderberg Mine is progressing satisfactorily and more rapidly than was anticipated. Tribute ore of the value to the company of about $1000 was on hand. The board has wired instructions to recommence work on the Bullwhacker Mine.

NEW QUEBRADA.—Month of September:—Output, 1430 tons. Despatch from mines, 1390 tons—13·05 per cent. dry. Home arrivals, 908 tons. Sales, 903 tons; average price per unit, 11s. 3d. Quantity afloat on Sept. 30, 1739 tons. Stock at the mines, 940 tons. Stock on wharf at Tucacas, 1850 tons.

SANTA BARBARA (Gold).—Thos. Tregellas, Pari, Oct. 14: During September 1093 tons of mineral were stamped, producing 4148 oits. of goid, equivalent to 3·777 oits. per ton of stone stamped. This produce of 4148 oits., valued at 8s. 6d. per oitava, amounts to 1762*l*. 13s.; and the estimated working cost for the month at exchange 21½d. being 987*l*. 4s. 6d., leaves an estimated profit of 775*l*. 13s. 6d. for September. Mr. Tregellas reports that no change of note had taken place in the appearance of the lode; at No. 6 stope south it continued to yield good quality stone, and at No. 7 stope the lode was without alteration. On Oct. 4 a portion of the hanging wall gave way at the south section of the mine, as reported on in the mine captain's report, and no stone had been quarried at the No. 5 stope south since this crush, nor was it anticipated that any mineral would be raised from the stope for the next four weeks, as it was expected that it would take that time to get the place secured with timber, which was being done as fast as possible. The force at the mine was gradually augmenting, it averaging 212·5 people during September, against 200·2 for July. The quantity of ore raised during the month amounted to 1374 tons, of which 276 tons have been rejected as refuse stone and 1098 tons treated at the stamps. Average quantity of ore raised per bored for the month 30·4 tons, or per hole bored 0·580 ton.—N.B.: The directors have declared an interim dividend on account of the current year of 1s. 6d. per share, or 15 per cent., payable on Nov. 22.

JAVALI.—Extract from manager's letter, dated Oct. 6: Contrary to all our expectations we again have the misfortune to send you a most unsatisfactory remittance. As yet the quartz has not given signs of an improvement, but steps are being taken to procure stuff from places where we know better quartz must be. The housing in of portions of our surface workings did not prove itself so advantageous as expected, the manto having become poorer and poorer, and as we are continually changing the place it would not pay to go to the expense of a roof at any one place, which might in a very short time no longer yield manto of a payable value.—Mine: 41⅓ varas have been driven in the interior. The remainder of the stuff crushed came as usual, from the surface. The sinking of the shaft in Pim's and Pollock's tunnels have proceeded slowly, the men being sick part of the month. Concepcion Mine has yielded about 200 varas of manto, but as yet we have not reached the lode.—Mill and Remittance: The mill worked with 30 stamps, and 21 days' crushing, 1575 tons of quartz, which yielded 234¼ ozs. of gold, making an average of 3 dwts. per ton.—Tailings Mill: We treated 215 tons of tailings, which yielded 19¾ ozs. of gold—an average of 1 dwt, 20 grs. per ton.—Receipts and Expenditure: The expenditure was 837*l*. 12s. 4d., the remittance is valued at 600*l*., thus leaving a balance loss of 237*l*. 12s. 4d.—Health and Labour: Dr. Hannay sends his report: Labour is sufficient. In a further letter to the chairman Mr. Hennecke described some experiments in the reduction of the tailings giving promise of very good results.

ISABELLE (Gold and Silver).—Lewis Chalmers, Oct. 27: I hope that Colonel Beaumont will pay us a visit soon, and that you will send me without delay the information which I have asked you for, so that I may institute a comparison between our work and his. As all the lodes are blind until we reach the company's sett I cannot with any degree of accuracy lay down the course of any of them so as to say when they will be cut by the tunnel. The following is the foreman's report for the week ending Oct. 25:—Total distance from the monument to the face of the tunnel, 1233 feet; advance for the week, 47 feet. The rock has been very tough and hard, and the meanest blasting in the whole length of the tunnel. Machinery all running smooth, requiring no repairs.

SENTEIN.—The managers (Nov. 15) report there is no change worthy of remark in our No. 4 level end driving west from the cross-cut—driven this week about 80 centimetres. We are pleased to state there is a marked improvement in the stopes east and west of the cross-cut in this level since our last report. The stopes in the level above are of about the same value as last week; here we shall require some timber soon for stulls. If we continue stoping there during the winter, so as to have a reserve of ore, when the wire-rope is finished, and should we take away much of the lode without putting in timber, it is very possible that large quantities of ground might fall in. We have not reached the lode in the St. Barbe level yet. Ore broken for the week 175 tons, and brought down to the floors 193 tons. We have dressed 26½ tons of No. 1 and 2 tons of No. 2 silver-lead ore, and about 40 tons blende. We have magnificent weather, but it freezes very hard during the night, so much so that the ore gets frozen—consequently it is very difficult to dress.

ALAMILLOS.—Nov. 12: In the 20, west of San Felipe shaft, the lode has fallen off in value; but it is still well defined, and is valued at ½ ton per fathom. The lode in the 100, east of Taylor's, does not contain any lead to value. The lode in the 115, west of Taylor's, is large and good looking, yielding 1½ ton per fathom. In the 100, west of Taylor's, the lode is poor, but the ground is more favourable for working. The lode in the 85, west of San Adriano, is promising, and contains good stones of ore. The 60, east of San Victor, is communicated with Campo's winze; the lode contains a little lead, worth ½ ton per fathom. In the 70, east of San Victor, the lode has somewhat improved, and it is producing a little ore. The lode in the 70, west of San Victor, has fallen off in size and value, and is now yielding ½ ton per fathom. In the 50, east of Judd's cross-cut, the lode does not contain any ore to value. The lode in Merino's winze, below the 40, is poor, and the ground hard for sinking. Cristobal's winze, below the 60, is being sunk east of San Victor's shaft, and in a rich lode, producing 3 tons per fathom.

BUENA VENTURA.—Nov. 12: In the 25, east of No. 1 engine-shaft, the lode is small, but very compact and regular, yielding 1 ton per fathom. The lode in the 25, west of No. 1 engine-shaft, contains a few spots of ore, but nothing to value. In No. 1 engine-shaft, below the 25, good progress is being made in the sinking; but the lode does not contain ore enough to value. No. 1 winze, bklow the 10, is improving, and yielding stones of ore.

FORTUNA.—Nov. 12: Canada Incosa: In the 120, west of O'Shea's, a good length of moderately profitable ground is being opened up, yielding 1 ton per fathom. The lode in the 60, west of Abercrombie's, is regular, with occasional stones of ore. In the 50, west of Abercrombie's, there is a compact and well defined lode, worth 1 ton per fathom. The lode in the 70, west of San Pedro's, is strong, consisting chiefly of quartz, calcareous spar and stones of ore; valued, 1 ton per fathom. In the 60, west of San Pedro's, there is a well formed lode with good stones of ore, producing ½ ton per fathom. From the 80, east of San Pedro's, the men are driving south, where we expect to find the main part of the lode. The lode in the 70, east of San Pedro's, has fallen off a little in the past fortnight, now worth ¾ ton per fathom. In the 120, east of O'Shea's, there is a large strong lode, but does not at present contain ore enough to value. The lode in the 100, east of Lowndes', is open and promising, yielding ¾ ton per fathom. The 90, east of Caro's, has improved a little during the past fortnight; at present worth 1 ton per fathom. In Lius's winze, below the 40, the lode is very regular; worth ½ ton per fathom, and we expect it will improve shortly, there being a good lode in the level under it. Pipe's winze, below the 50, has declined in value somewhat in the last few days, producing ¾ ton per fathom.—Los Salidos: In the 160, west of Taylor's, the lode is small and at present irregular, valued at ¾ ton per fathom. In the 160, east of Taylor's, the lode is cut off by the slide; we have now to drive north to reach the point of it under the slide. The lode in the 145, east of Taylor's, is large, with good stones of ore; yielding ¾ ton per fathom. In the 130, east of Taylor's, the lode is disarranged, and not quite so productive as it was; its present worth is ½ ton per fathom. The 120, east of San Pablos, continues to open up a splendid run of ore ground, yielding 3 tons per fathom. In the 110, east of San Miguel, the lode is small and unproductive. In the 80, west of Palgrave's, the lode has not yet been reached. The lode in the 80, east of Palgrave's, is rather small, producing ½ ton per fathom. In Taylor's engine-shaft, below the 160, the lode is thrown north by the slide, and will not be seen again in the shaft during what remains of the sink. Hiberto's winze, below the 110, is going down in a very fine lode; worth 3 tons per fathom. The weekly weighings of ore were kept up very regularly during the past month, and the stopes are yielding moderately well at present. The works at surface are going on steadily, and the machinery is in good condition. We estimate the raisings for November at 350 tons.

LINARES.—Nov. 12: In the 115, east of Warne's, there is a large lode containing a few spots of ore, bnt not enough to value. The lode in the 115, west of Warne's, is very open and easy and yielding good stones of ore. In the 135, west of Peill's, the lode is improving in this level, now worth 1½ ton per fathom. The lode in the 120, west of Peill's, is small and unproductive. In the 105, east of Peill's, there is a regular and well-defined lode, yielding 1½ ton per fathom. The lode in the 135, east of Peill's, has fallen off a little during the past fortnight, now worth ½ ton per fathom. The 120, east of Peill's, is opening up valuable ore ground, worth 2 tons per fathom. In the 105, east of San Francisco, the ground is hard for driving, but the lode is very compact and regular, yielding 2 tons per fathom. No. 232 winze, below the 105, is going down in a good shoot of ore, valued at 2 tons per fathom. The lode in No. 233 winze below the 120 is very regular, consisting of quartz and lead ore, worth 1 ton per fathom.—Quinientos Mine: In the 100, east of Taylor's, the lode is very open, and yielding stones of ore, but not sufficient to value. The lode in the 90, east of Taylor's, is large and kindly, but not so productive as it was, now worth 1½ ton per fathom. In the 80, east of San Carlos, the lode is of a promising appearance, consisting chiefly of carbonate of lime, and yielding good stones of ore, valued at ¾ ton per fathom. The lode in the 80, east of western boundary, has improved during the past fortnight, now yielding 1 ton per fathom. The 55, east of western boundary, is opening up a good length of ore ground, producing 2 tons per fathom.

THE WEEK.

SATURDAY, Nov. 15.—American railways are extremely buoyant, in marked contrast to the depression of the day previous. Those who had then the courage to buy Eries and Atlantics found their profit to-day. Erie shares advanced 82⅝, to 84⅝, and the second mortgage 2½, to 94*l*. Atlantic and Great Western first mortgage, from being 52½ yesterday, realised to-day 55. The second mortgage rose 1¼. Home railways were also good. From 132¾ Brighton, A, rose steadily to 134. Berwicks were in strong demand, and advanced over 2*l*., to 149½. York, A, closed 1½ better. Mining shares showed little alteration. But a moderate busineas was transacted in Flagstaffs, and the price (1⅜ to 1⅝) showed no change. Panuleillo, Pestarena, Kapanga, and Last Chance were in good demand. Grand Trunk issues were particularly buoyant, and in some cases 2*l*. up. The capital needed for completing the line to Chicago has been promptly subscribed.

MONDAY.—A very large business was done in Grand Trunks, and prices were put up a good deal further. The Second Preference moved up no less than 3*l*., and the First Preference 1½. Great Western of Canada shares were inclined to be strong at one time, but as soon as 12½ was bid so many were offered that the last price was only 12⅜ to 12½. Home railways were strong, owing to an increase of over 3400. Dover, A, was in marked request, and ultimately closed at an advance of 2⅜ on the day. Great Eastern, Sheffield, and North British were strong markets. The bidding for waterworks shares was resumed, several issues closing 3*l*. and 5*l*. higher, without any business being recorded. The demand for shares appears to have arisen from the Bill for compulsory purchase of the Metropolitan waterworks being put forward again.

TUESDAY.—Grand Trunk again moved upward. The Second Preference closed 1¾ higher, at 50, the First touched 69, and the Third 27¾. A year ago prices were as follows:—First Preference, 33; Second Preference, 22; Third, 10. One must go back to 1875 and 1874 to find similar prices to those ruling now. During 1674 the Firsts touched 77; Seconds, 67; and Thirds, 37. In home railways Dover, A, was in high favour again, and closed 2 better, at 122½. On Friday evening the stock might have been bought 5*l*. below this. North-Eastern closed at 151, and Brighton, A, at 135. Egyptian Unified rose 1, and the Preference 1. In waterwork shares Grand Junction rose 6; East London, 5½; West Middlesex, 8; and Lambeth, 3.

WEDNESDAY.—Dover, A, advanced to 123, and North British to 80¾; most of the other changes were adverse, however, realisations taking place after the issue of the traffic returns. Great Western and Midland both fell 1*l*., as did Berwicks. American lines were out of favour. Atlantic and Great Western First Mortgage from 54½ fell rapidly to 52¼, then recovered to 53. The Second Mortgage receded 1½. Illinois, Pennsylvania, and Philadelphia and Reading shares all closed 1 lower. Erie Second Mortgage fell 1½. Waterworks shares were again in marked request, several advancing from 3 to 5.

THURSDAY.—Mexican railway shares now fetch close upon 6, and the First Preference are worth 16. As recent as last month the purchase of the former at 2½, and of the other at 8, was urged in "The Week." The Second Preference shares should be selling for more than they are. Erie shares and bonds were again sold at lower prices. Business in home railways was rather checked by the fact of snow falling all day, but North British being superior to all ordinary considerations, even those of a dividend was a very buoyant market, being rushed up over 4 per cent. at one time.

FRIDAY (*Opening*).—We are favoured with a blinding fall of snow and a semi-panic in the American market. Everything is in confusion, and quoted prices are only reliable in cases where it suits the jobbers to deal. Erie shares are down from 84⅝ to 84*l*, the Second Mortgage are being sold with difficulty at 86 against 89 yesterday. Reading General, 1874, bonds have dropped 3, without a bargain being recorded. Atlantic First and Second Mortgage are down 1½. Home railways are being pressed for sale. Brighton, A, is no better than 132½, British have fallen 1 per cent., the same fall being registered in Dover, A. Mining shares are inclined to dulness, and the bidding for Flagstaff, Last Chance, and one or two others seems at an end. Great Western of Canada have receded to 11¼.——*Two o'clock.*—The markets are now steadier, and prices are better all round. Erie Seconds from being 85¾ are now 87, Atlantic Firsts have rallied to 52. Pennsylvania shares are steady at $50. Reading General bonds show a decided recovery, now 85 after being 83. Brighton, A, has recovered to 133, and North British to 83⅜. Metropolitan and District maintain a firm front, and have not been affected by the wild selling in the morning. Unified, 48¼ to 48½; preference, 76⅝ to 76⅞; New Quebrada, 3½ to 3¾; Eberhardt, 3⅜ to 3⅝; Nouveau Monde, ¼ to 1; Don Pedro, ⅝ to ¾; Erie shares are 84⅛ to 84⅜.——*Four o'clock.*—The recovery was all lost towards the close, by Eries being telegraphed from New York as low as 37½. The shares fell rapidly here from 84⅜ to 83⅝, and in the Second Mortgage the wildest prices were made from 83 to 88, regardless of the fact that a change of 1*l*. means 20*l*. on every 1000*l*. Reading shares and bonds and Atlantics were pushed down too. British went back to 82, Brighton, A, to 132½. Wheal Crebor advanced to 6⅝ to 6⅞; Great Eastern, 59¾ to 60; Flagstaff, 1⅛ to 1⅜.

FERDINAND R. KIRK.

LIST OF SMELTING, METAL EXTRACTION, ARSENIC, AND BARYTES COMPANIES IN THE UNITED KINGDOM, 1878.

(From the Mining Record Office Statistics.)

TIN.

Thomas Bolitho and Sons, Chyandour and Angarrack, Cornwall.
Williams, Harvey, and Company, Trethellan and Melianear, Cornwall.
Daubuz and Company, Cavedras and Treloweth, Cornwall.
R. R. Michell and Company, Trereife, Penzance Cornwall.
Bissoe Bridge Company, Bissoe, near Truro, Cornwall.
Redruth Tin Smelting Company, Redruth Cornwall.
Calenick Tin Smelting Company, Calenick, Cornwall.
Charlestown Tin Smelting Company, Charlestown, St. Austell.

COPPER.

Vivian and Sons, Swansea.
Pascoe Grenfell and Sons, Swanse.
Nevill, Druce, and Company, Llanelly.
Williams, Foster, and Company, Swansea.
Mason and Elkington, Pembrey.
Copper Miners' Company, Aberavon.
Charles Lambert and Company, Swansea.
The British and Foreign Copper Company, Liverpool and St. Helen's.
Bibby, Sons, and Company, St. Helen's and Liverpool.
W. Roberts, jun., St. Helen's.
James Keys and Son, Whiston Works, Cheadle, Staffordshire.
Sweetland, Tuttle, and Company, Swansea.
Ravenhead Copper Company, Liverpool.

LEAD.

Nevill, Druce, and Company, Llanelly.
Runcorn Smelting Company, Runcorn.
The Panther Lead Works, Bristol.
Sheldon, Bush, and P. S. Company, Redcliff Hill, Bristol.
Weston, Son, and Company, Bristol.
W. J. Cookson and Company, Newcastle.
Lecke, Blackett, and Company, Newcastle.
Shield and Dinning, Haydon Bridge.
Vivian and Sons, Swansea.
Howden Smelting Company, Newcastle.
Washington Chemical Company, Newcastle.
Enthoven and Sons, London.
Lock, Lancaster, and Company, London.
Pontifex and Wood, Farringdon Works, London.
Logan Edward, Birkenhead
Treffry's Estate (C. Remfrey), Par, Cornwall.
Peter Glover and Robinson, Widnes Lead Works, near Warrington.
Adam Eyton, Llanerchymor, Holywell.
The Cambrian White Lead Company, Brymbo, near Wrexham.
Joseph Walker, Parker and Co., Dee Bank, Bagilt, and Newcastle.
Governor and Company of Lead Smelters, Nenthead, Alston Moor.
W. B. Beaumont, Allendale, Alston Moor.
Mill Dam Mining Company, Bakewell.
Joseph Wass and Company, Lea Lead Works, Matlock Bath.
J. Fairburn and Company, Middleton Dale and Bradwell.
Snailbeach Lead Company, near Shrewsbury.
Robert Howe Ashton, Castletown, Derbyshire.
Via Gellia Lead Works, Cromford—(Mr. Salisbury, Derby).
E. Backhouse, Darlington.
Greenside Mining Company, Penrith.
The Keld Head Mining Company, Wensleydale.
George York, Pateley Bridge.
Duke of Devonshire, Grassington.
The Duke of Buccleuch, Wanlock Head.
The Lead Hills Mining Company, Lead Hills.
The Hurst Mining Company, Hurst.
Lister, Robinson, and Company, Grinton Moor.
R. M. Jaques and Company, Arkengarthdale.
The Blakethwaite Lead Company, Blakethwaite.
R. Milner and Company, Belde Hill.
The Swaledale Lead Company, West Swaledale.
Charterhouse, Blagdon, Mendips, Bristol.
Waldegrave Lead Smelting Company (Limited), Mendips, near Wells.
The Mining Company of Ireland (Limited), Dublin.

ZINC.

Bagilt Zinc Company.
Vivian and Sons, Swansea.
William Marsden, Oldland Hall, near Bristol.
Kenrick and Son, Wynn Hall, Spelter Works, Ruabon.
Charles Titterton, Phœnix Zinc Works, Warrington Junction.
Dillwyn and Company, Swansea.
J. Collingborne, Spelter Works, Warmley, Bristol.
Joseph Thompson, Spelter Works, Carlisle.
Ryland Brothers, Warrington.
Richardson and Company, Swansea.
Crown Spelter Company.
Villiers Spelter Company, Morriston, Swansea.
Swan and Company, Maryhill, Glasgow.
Swansea Vale Spelter Company (Limited), Swansea.

PYRITES PRECIPITATE COMPANIES.

Duncan McKechnie, St. Helen's.
The Widnes Metal Company, Widnes.
The Tharsis Sulphur and Copper Company, Widnes; Newcastle; Birmingham; Glasgow and Cardiff.
N. Mathieson and Company, Widnes.
The Runcorn Soap and Alkali Company, Runcorn.
Wigg Brothers and Steele, Runcorn.
Newton Heath Reduction Company, Manchester.
Muspratt Brothers and Huntley, Flint.
William Russell and Company, Newcastle.
The Bede Metal and Chemical Company, Newcastle.
W. Hunt and Sons, Leabrook, Wednesbury.
William Hunt, Castleford.
Harrison, Blair, and Company, Kearsley, Bolton, Lancashire.
Henderson and Company, Irvine.
Eyton Copper Company, Mostyn.
William Haslam, Bolton, Lancashire.
Morris and Company, Doncaster.
H. D. Pochin and Company, Newcastle.
South Devon Metal and Chemical Company, South Down, Devonport.
H. G. Lord and Company, Calstock.
Holmbush and Kelly Bray Company, Callington.
Redmoor Company, Callington.
Gibbs, Jackson, and Company, Newcastle.
Plympton Mining and Arsenical Company (Limited).

ARSENIC.

Cornwall Arsenic Company, Hayle and Bissoe Bridge, Thomas Willis Field, Managing Partner, Marazion, Cornwall.
Devon Great Consols Mining Company (Limited), Tavistock.
J. B. Drayson and Company, Harrowbarrow, Callington.
English Arsenic Company, Roseworthy, Gwincar, Cornwall.
J. J. Rayner, Morriston, Swansea.
A. C. Hadland, Swansea.

BARYTES MANUFACTURERS.

Pegg, Harper, and Company, Derby.
Ellam, Jones, and Company, Derby.
Stevens Brothers, Matlock Bath.
Mr. Garton, Lumsdale, Matlock Bridge.
Mineral Paint Company, Cromford, near Matlock Bath.
Wm. Hawley, Bonsall, near Matlock Bath.
E. Brown, Bonsall, near Matlock Bath.
Hegginbotham, Stoney Middleton, near Sheffield and Whaley Bridge.
Middleton Dale Barytes Company, Stoney Middleton, near Sheffield.
White and Company, Chapel-en-le-Frith, near Stockport.

NICKEL AND COBALT.

R. Hussey Vivian, M.P., Swansea.
Stephen H. Barker, Birmingham.
Henry Wiggin and Company, Birmingham.
W. Webb and Company, Aston, near Birmingham.
J. H. Williamson, Stoke-upon-Trent.
Rawlins and Son, Liverpool.

GOLD AND SILVER SMELTERS.

Vivian and Sons, Swansea.
Johnson, Mathey, and Company, London.

SILVER ORE SMELTERS.

Vivian and Sons, Swansea.
Nevill, Druce, and Company, Llanelly.

*** With this week's Journal a SUPPLEMENTAL SHEET is given, which contains: Original Correspondence: Iron Trade in America (D. T. Anstey); Canadian Mining Notes; International Exhibition, New South Wales, 1879 (R. D. Adams); Immense Increase of Revenue to Russia—Hyper-rehabilitation of the Imperial Finances (W. J. Thompson); the Panulcillo Copper Company; the Flagstaff Silver Mining Company of Utah (A. A. de Metz); State Purchase of Railways; Water-Power for Mining Purposes—No. IV. (G. Rickard); the Pneumatic Mineral Separator (B. W. Hart); Aluminium and its Alloys; Sulphuric Acid Manufacturers; the Instantaneous Fuse and Igniter (J. Barkell); Darlington Rock-Drill (J. Barkell); Boring Machines (J. Shaw, F. J. King); Rock-Boring Machinery (J. Darlington); Wheal Agar—Boring Machines—Eclipse Drill (H. Waddington); Jet Mining in Yorkshire; Pant-y-Mwyn Lead Mine, near Mold; South Darren Silver-Lead Mine; Wendron Mines; Chiverton and East Chiverton; South Crebor Mining Company; Bryn Glas Mining Company (H. White); Bwlch United Mines; Mining in Montgomeryshire and North Wales; the Llanrwst District—No. IV.; Mining in the Llanarmon District; Llanarmon Lead Mining; the Chemical Trade. The Scotch Mining Share Market—Weekly Report. Meetings of Public Companies: Scottish Australian, North Penstruthal, North Hendra, Hingston Down Consols, Devon Great Consols. Levant. Foreign Mining and Metallurgy. Improved Telegraph Wire; Welded Tubes. Foreign Mines; Australian Mines. Double Piston Steam-Engine; Motive Power Engine; Reducing Alkaline and Earthy Sulphates; Collecting Waste Fumes of Lead Smelting Furnaces; Casting Steel; Sales of Copper Ores; Native British Silver and Gold; Prismatic Powder, &c.

Mr. THOMAS THOMAS,
MINERAL AGENT AND ASSAYER,
COPPER ORE YARD, STRAND, SWANSEA.

Sales and Purchase of Minerals and Metals arranged. Assays and Analyses carefully conducted. References given.

C. A. SCOTT,
METAL AGENT AND BROKER,
7, PARADE, BIRMINGHAM.

TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply to—
MESSRS. PELLY, BOYLE, AND CO.,
SWORN METAL BROKERS,
ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.
(ESTABLISHED 1849.)

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, NOV. 21, 1879.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde..	2 16 3–	—
,, Scotch, all No. 1 ...	2 17 0–	3 5 0
Bars, Welsh, f.o.b. Wales	6 0 0–	—
,, ,, in London.	6 10 0–	—
,, ,, Stafford., ,,	7 0 0–	7 15 0
,, in Tyne or Tees ...	6 5 0–	—
,, Swedish, London...	9 10 0–	—
Rails, Welsh, at works ..	6 0 0–	—
Sheets, Staff., in London	9 0 0–	—
Plates, ship, in London.	7 12 6–	—
Hoops, Staff., ...	7 15 0–	—
Nail rods, Staff., in Lon.	7 5 0–	7 10 0
STEEL.		
English, spring 13	0 0–19	0 0
,, cast 30	0 0–40	0 0
Swedish, keg 13	0 0–	—
,, fag. ham. 15	0 0–	—
LEAD.		
English, pig, common...17	0 0–	—
,, ,, L.B. 17	2 6–17	5 0
,, ,, W.B. .....(nom.)–		—
,, sheet and bar..17	15 0–18	0 0
,, pipe 18	0 0–	—
,, red 18	5 0–18	10 0
,, white 28	0 0–29	0 0
,, patent shot ...19	0 0–	—
Spanish 16	15 0–	—
NICKEL.		
Metal, per cwt. 15	0 0–16	0 0
Ore, 10 per cent. per ton.20	0 0–25	0 0
QUICKSILVER.		
Flasks, 75lbs., war. (nom) 7	5 0–	—
SPELTER.		
Silesian 19	10 0–19	15 0
English, Swansea 19	0 0–	—
Sheet zinc.....24	0 0–25	0 0

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b...	94 0 0–	95 0 0
,, bars ,, ...	95 0 0–	96 0 0
,, refined	96 0 0–	97 0 0
Australian	91 10 0–	92 0 0
Banca	94 0 0–	—
Straits	91 10 0–	92 0 0
COPPER.		
Tough cake and ingot.	69 0 0–	70 10 0
Best selected	71 0 0–	73 0 0
Sheets and sheathing.	74 0 0–	75 0 0
Flat Bottoms	78 0 0–	79 0 0
Wallaroo	74 0 0–	74 10 0
Burra, or P.C.C.....	72 0 0–	—
Other brands	70 0 0–	71 0 0
Chili bars, g.o.b.	65 10 0–	66 0 0
PHOSPHOR BRONZE.		
Alloys I., II., III., and IV.	...	£115 0 0
,, VI. and VII.		130 0 0
,, XI., Spl. bearing metal		110 0 0
BRASS.		
Wire	7½d.–	—
Tubes	9	– —
Sheets	8¼	–8¾d.
Yel. met. sheath. & sheets	6	–6¾d.

TIN-PLATES.*	per box.
Charcoal, 1st quality ... 1	8 0–(nom.)
,, 2nd quality ... 1	6 0– ,,
Coke, 1st quality 1	4 0– 1 5 0
,, 2nd quality 1	3 0– 1 4 0
Black..... per ton 17	10 0– ,,
Canada, Staff. or Gla. at Liverpool 12	0 0– —
Black Taggers, 450 of 14 × 10 30	0 0– —

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—During the past week there has been less speculation, and the markets have resumed a quieter appearance, and consequently the business transacted has been of a more satisfactory and reliable character. Nevertheless, there are still some few buyers who seem to possess sufficient confidence in the markets to operate for a rise, although the statistical position of metals scarcely favours such views. The production of most metals has been stimulated by the recent rise, which was perfectly unnecessary, as the stocks and supplies were quite large enough before, and instead of the markets, therefore, being relieved an additional burden may now have to be borne, and with increasing value of money lower prices will probably have to be submitted to. As regards the effect of the recent excessive speculation, it is now beginning to show itself in the unsteadiness of prices, and for the next two or three months the markets may be expected to remain unsettled, and the immediate future will greatly depend upon the manner in which prompts are met. Capitalists will, of course, experience no difficulty in financing, but it may be somewhat different with the speculative public, especially considering the great exhaustion occasioned by the lengthened depression in business which prevailed up to within the last few months. Under these circumstances it is almost impossible that losses of any serious amount could be sustained without producing a semi-panic, and it is, therefore, advisable that weak and feeble holders should cut their loss, and close their bargains without delay, otherwise the opportunity of doing so may be unfortunately missed.

A very able review upon the speculation of the period was inserted in the Daily News of last Monday, under the heading of Trade and Finance. We recommend the perusal of it to those of our readers who have taken such a sanguine view of the revival of trade; a revival, indeed, has set in, but it is only slight, and far from being adequate to the advance which has taken place in prices. It is to be hoped that the recovery will prove permanent, at the same time its continuance and development will greatly depend upon the prices demanded. If moderate there is no fear but what in a little time the demand may increase; but, on the other hand, if sellers attempt to exact too much they will defeat their own ends. Many false starts have been made from time to time, and it by no means follows that, although the present start appears to be made under fairly favourable auspices, it will prove successful, and permanently establish trade on a stronger basis. It is next to an impossibility that uninterrupted success can be attained so immediately after such a lengthened and severe strain as recently experienced throughout the country, and particularly in respect to the agricultural and commercial classes; their means are considerably reduced, and, therefore, their power of consumption must of necessity be reduced. The revival is not yet perceptible in discount circles, and there is no increase of trade bills. The ensuing season is not generally propitious for fresh enterprise, and there is nothing at the present time to warrant a departure from the ordinary course of business, a slight reaction would be beneficial after so much inflation.

COPPER.—There are 4700 tons (charters) of copper to be added to the stock of 55,658 tons published on the 1st inst.; and as the deliveries of Chilian produce from Swansea and Liverpool for the first half of the month only amounted to about 400 tons, there will in all probability be a considerable increase in stocks in the next return, as the deliveries for the remainder of the month, including London and Havre, are not likely to approach 4300 tons; but taking the average deliveries of Chili here—and more than an average can scarcely be expected—and allowing 1400 tons for Havre and London, which is really taking a very sanguine view, it would leave 57,000 or 58,000 tons of copper to be dealt with in December, or an increased accumulation during the present month of several hundred tons. But at the most moderate calculation the stock on the 1st proximo will be at least 57,000 tons, or the same as at the beginning of August last, when the price of Chili bars was 53*s.* 5*s.*, or 12*l.* to 13*l.* per ton less than the present quoted price. The actual stock of Chili produce will probably in a very short time show a great increase, as the quantity afloat and chartered is 17,000 tons, against 12,600 tons on Nov. 15, 1878. A whole fleet of vessels, with several thousand tons of copper, may be looked for upon a favourable change of wind. The deliveries up to latest reckoning this month have been exceptionally small—the smallest on record for this year; but the reason of it is plain enough, for there has been next to nothing doing; and, besides, consumers had previously anticipated their requirements, and are still well supplied. There is no sign of any improvement as yet from India or in the continental demand, and not even for Birmingham; and, in fact, the ordinary demand is very dull indeed. But speculation is going on, and prices are consequently prevented from falling to their proper level; but the fall is only postponed, to be so much greater when it does take place. However capable operators may be, yet they will scarcely care to saddle themselves with a large quantity of copper at dear prices, especially when stocks are accumulating; but it is the public who is too confiding, and ought to be guarded against the free indulgence of that delightful luxury, for it invariably ends in loss and disappointment.

IRON.—There is not very much change in the state of this market, prices keeping, on the whole, steady, and the demand showing but little alteration. Prices appear to have now about reached their proper level, as they are being maintained by legitimate trade, which continues very satisfactory compared with what it was for the same period of last year, but the orders do not come so much through the London houses as through other sources, and consequently our market appears to be tolerably quiet compared to what is reported from other places. The fluctuations which may take place during the next month or so will probably be of a trifling character, as most makers are said to have sufficient orders on their books to keep their mills well employed for some time to come. The manufactured trade remains fairly steady, rails continuing in good demand for export to America, as well as for the home consumption. Enquiries also come forward for other descriptions, though the Indian markets only participate in the general activity to a very slight extent, having previously purchased in large quantities. The reports from the Welsh districts continue satisfactory, though there is not much change in the state of the markets. The increased demand which has been noted during the last few weeks is well maintained, though it shows little or no improvement. Prices, too, seem to have reached about their highest, as only in a few instances have they been advanced.

The demand for all descriptions of both raw and manufactured continues very fair, and large clearances are still being made, chiefly to the United States as usual. Owing to the activity which has been manifested at Cyfarthfa Works since their re-opening, it is generally thought that ere long preparations will be begun to increase the output. There is a rather better demand for bars, as well as for other descriptions. The Sheffield market continues animated, and the men in this district are expected to be well employed throughout the winter. The rail mills are turning out large quantities, and the demand for old material for foreign railways is very good. There have been a few large orders received for ship-plates at recent rates. The Australian demand is particularly satisfactory, but that from the Cape merchants is said to have slightly fallen off. There is a continuance of the improvement in the trade at Birmingham, and most manufacturers are well supplied with orders. The demand from both home consumers and shippers is brisk, and the prices are well maintained. From Wolverhampton it is stated that railway companies, shipbuilders, and other buyers are desirous of placing orders for forward delivery at present prices, but have not been very successful in their attempts, and makers finding that buyers will be requiring more iron shortly, and having plenty of orders in hand to keep their mills well employed for the present, have become firmer in their quotations. A good business is being transacted in railway iron, and former quotations are being withdrawn.

The Middlesborough market is reported steady, and quotations remain about the same as have been recently quoted, No. 3 selling chiefly at 41*s.*, though merchants in many instances ask 41*s.* 6*d.* Owing to the scarcity of No. 4 it is quoted at about 42*s.* Stocks in Connal's stores up to last Tuesday are said to be 91,500 tons, being an increase of 1500 tons for the week ending on that day. There is a little speculation going on in No. 3, and owing to the increased demand for malleable iron now forge iron has become in rather better request. Shipments have not reached the expectations of many; nevertheless, it is thought that they must shortly increase, as it is well known that some large orders which have been given out during the last three or four weeks for American account have yet to be shipped. The shipments of last week are estimated at about 13,000 or 14,000 tons of pig, and 3500 of manufactured iron. The finished iron trade is fairly active, ship-plates being quoted at 6*l.* 17*s.* 6*d.* to 7*l.*, and bars and angles at 6*l.* 2*s.* 6*d.* to 6*l.* 5*s.* per ton. The Glasgow warrant market keeps without any marked change, business having been carried through betwixt 55*s.* 11*d.* and 55*s.* 8*d.* cash, and the price for mixed numbers to-day is 56*s.* 3*d.* The shipments last week are reported at 13,149 tons against 7512 tons for the corresponding period of 1878, 7367 tons in 1877, 8181 tons in 1876, and 10,379 tons in 1875.

TIN.—This market, having closed last week very firm, at 92*l.* for foreign, remained fairly steady up to Wednesday, when a few sellers displayed some eagerness to sell slightly below current rates, and 91*l.* 10*s.* to 92*l.* was then officially quoted, and yesterday 91*l.* was reported to have been accepted, but the price to-day is again 91*l.* 10*s.* to 92*l.* There is not very much change in the position of this metal—the deliveries keep good, but the arrivals, according to the Custom's returns, seem to be very much larges than what they were last month. The market for English is steady, and prices are quoted 94*l.* to 95*l.* for blocks and ingots.

LEAD.—This market shows little or no alteration, prices remaining as quoted last week, and the demand for shipment keeps limited.

SPELTER.—At times sellers have been demanding higher prices, bnt buyers generally are indisposed to pay any further advance. The market for Silesian closes to-day at 19*l.* 10*s.* to 19*l.* 15*s.*, and for English hard at about 14*l.* 10*s.* to 14*l.* 15*s.* per ton.

STEEL.—This market shows no change.

TIN-PLATES continue in fair demand, at former quotations.

QUICKSILVER.—The importers' price has remained all the week at 7*l.* 5*s.*, and good sales have been effected every day. Second-hand sellers have quite disappeared, and nothing is obtainable under the official quotation.

CHEMICALS, MINERALS, AND METALS.—Messrs. J. Berger Spence and Co. (Nov. 15).—Alum: Loose Lump, 6*l.* 5*s.* to 6*l.* 10*s.*; ground, 7*l.* 15*s.*—Arsenic: Best white powdered, 11*l.*—Bleaching Powder, 7*l.*—Borax: Refined English, 36*l.*—Copperas: Green, 55*s.*; white, 6*l.* 15*s.*—Copper: Sulphate, 23*l.* 17*s.* 6*d.*—Nitrate of Lead, 31*l.*—Nitrate of Soda: 18*s.* 6*d.*—Potash: 11¼*d.*—Saltpetre: Refined English, 24*l.* to 27*l.*—Soda: Cream Caustic, 11*l.*—Sulphate of Zinc, 8*l.* 10*s.*—Sulphur: Roll, 7*l.* 10*s.*; flour, 10*l.* 5*s.*—Tin crystals, 7½*d.* per lb.—White lead, 19*l.*—Barytes: Carbonate, 90*s.*—Brimstone: Best thirds, 5*l.* 2*s.* 6*d.*—China-Clay, 38*s.*—Manganese: Sulphate, 16*l.* 15*s.*—Mineral White, 40*s.*—Ochre, 5*l.* 10*s.*—Oxide of Zinc, 19*l.* 10*s.*—Talc, 5*l.*—Umber, 70*s.*—Copper: Best Ingot, 72*l.*—Lead: Best soft English, 17*l.*—Pig-Iron, 41*s.*—Spelter: English, 19*l.* 5*s.*—Tin, 95*l.*—Cream of Tartar: Crystals, 114*s.*; powdered, 118*s.* 3*d.*—Charcoal: Best stick, 4½*d.* per bushel; field burnt, 6*d.*—Globe Steam-Boiler Powder, 16*s.* per cwt.—Naptha: Miscible, 5*s.* 3*d.*—Resin: Common strained, 5*s* 10*d.*—Ultramarine, 50*s.* to 100*s.*

Messrs. HARRINGTON, HORAN, and Co. (Liverpool).—During the past fortnight upwards of 3000 tons Chili bars sold at 66*l.* down to 64*l.* 10*s.*, the market being steady at the latter price. In furnace moterial the transactions have been limited to 100 tons English precipitate at 13*s.* 9*d.* to 13*s.* 10½*d.*, 200 tons Spanish precipitate at 13*s.* 3*d.* to 13*s.* 6*d.* per unit, and at the Swansea sale 1728 tons ore, average produce 8⅜ per cent., realised 12*s.* 6*d.* per unit. Chili copper charters for the second half of October were 2600 tons fine, consisting of 2000 tons bars and 300 tons regulus for England, and 300 tons bars for the Continent. Imports of Chili copper during the past fortnight, 200 tons fine; delivery, 607 tons fine. Arrivals here during the fortnight of West Coast, S.A., produce: Springwood, from Valparaiso, 200 tons bars. At Swansea, nil. Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	—	—	23,536	—	—
Swansea.....	906	1870	3,634	—	—
Total	906	1870	27,170	—	—

Representing about 28,193 tons fine copper, against 28,600 tons Oct. 31; 23,490 tons Nov. 15, 1878; 17,464 tons Nov. 15, 1877; 12,981 tons Nov. 15, 1876. Stock of copper contained in other foreign ore and Spanish precipitate, 560 tons fine. Stock of Chili copper in Havre, 4288 tons fine, against 6678 tons Nov. 15, 1878. Stock of Coro Coro barilla in Havre, 125 tons fine, against 3250 tons Nov. 15, 1878. Stock of Chili copper afloat and chartered for to date, 17,000 tons fine, against 12,600 tons Nov. 15, 1878. Stock of foreign copper in London, chiefly Australian, 5440 tons fine, against 6616 tons Nov. 15, 1878.

According to the Board of Trade Returns the total imports and exports into and from this country for the first ten months of the following years were—

IMPORTS.	1877.	1878.	1879.
Copper in ores .....Tons	12,352	11,323	9,820
Copper regulus and precipitate	12,471	17,034	22,203
Bars, cakes, and ingots	34,382	34,730	38,931
In pyrites (estimated).....	14,857	12,286	13,046
Total	74,062	75,373	81,000
EXPORTS.			
English copper, wrought and unwrt...Tons	18,265	25,600	27,540
Foreign copper, unwrought	11,687	10,885	15,406
Yellow metal	14,401	12,620	14,233
Total	44,353	49,105	57,179

Messrs. FRY, JAMES and Co.—Our market continues to be well supported, and although speculative operations have abated, there has been considerable business doing generally. COPPER has found a ready market, and although the realisations of parcels of Chilian bought about two months ago have been numerous, and rather heavy, they have been taken off without depressing prices more than 10*s.* to 20*s.* per ton from the highest. IRON keeps firm for all descriptions, and a fair business is doing. TIN has been less pressed for sale, and quotations have been steady. There is a lull in active operations, partly due to the approaching sale of Banca in Holland, which takes place on Thursday next, the 27th instant. LEAD is firmer in price, and in steady demand. SPELTER is again rather dearer. TIN-PLATES are steady at late improved rates.

Messrs. BROOKER, DORE, and Co.—During the past month there has not been the same disposition to speculate that was noticeable in the early part of October, and our markets have all been in a less excited state. The fact that, notwithstanding this feature, the improved values have in nearly every case been maintained, and in some cases further advanced, warrants our belief that the recent improvement shows a *bona fide* revival of trade.——PIG-IRON has slightly fluctuated, and closes at 55*s.* 6*d.* to 56*s.*, which shows an improvement of about 1*s*, since we issued our last monthly circular.——FINISHED IRON: The list houses advanced their prices on the 6th inst. 10*s.* per ton, and a further rise will, no doubt, take place almost immediately. Second-class makes of iron are much dearer; the advances are altogether about 25*s.* on bars, 30*s.* on hoops, and on sheets 2*l.* to 2*l.* 10*s.* per ton, according to the gauges.

TIN-PLATES.—The market is somewhat less excited, and a few second-hand parcels have been offering at figures slightly under makers' quotations. Considering the great and rapid advance prices keep remarkably firm.——GALVANISED IRON.—A continuous rise in black sheets and spelter has occasioned a further advance of about 30*s.* per ton during the month; hitherto some of the makers who were fortunate enough to be well stocked with iron and spelter have been giving buyers the benefit, and these low sellers have kept prices down; as the cheap offers, however, disappear from the market quotations will be materially stiffened. The demand is good, and as the cablegrams to the colonies have had the effect of clearing the old stocks we now look for a continuously improving trade.—— LEAD.—Market firm. —— ZINC.—The "V. M." Company have advanced their price 20*s.* per ton, and other brands are 10*s.* to 15*s.* dearer.

Messrs. PIXLEY and ABELL.—GOLD.—The demand still continues, but as the gold obtainable in the open market has been so limited in amount, buyers have again had recourse to the Bank, and 659,950*l.* has been withdrawn. Of this, 262,000*l.*, in eagles, has been sent to New York, 116,000*l.* to Germany, 231,950*l.* to Egypt, 40,000*l.* to the Brazils, and 10,000*l.* to Bombay. The arrivals have been 14,475*l.* from Brazil, and 8310*l.* from India.——SILVER.—The market has again declined, and the nearest quotation we can give to-day is 53½*d.* per oz. "last price." The price of bar silver here has been materially affected by large transactions in bars and florins having taken place in Austria, for shipment at Venice to India, the total sales amounting to 280,000*l.* The supply by the W. I. steamer Para was placed at 53⅜*d.*; that by the Pacific steamer then came to hand, and could only be sold at 53¼*d.* per oz., the Indian Council drafts having just previously been sold at slightly lower rates. We have received during the week 48,000*l.* from Chili; 3510*l.* from India; 9820*l.* from New York: total, 61,330*l.* The Cathay takes 65,000*l.* to Bombay.

The MINING SHARE MARKET has been comparatively quiet this week, with very little alteration in prices generally. The mines dealt in have embraced Van, D'Eresby Mountain, South Darren, Glenroy, Leadhills, Herodsfoot, Great Laxey, East Caradon, Wheal Crebor, East Crebor, Tankerville, East Van, Hingston Down, Penstruthal, West Frances, Aberllyn, Marke Valley, and a few others.

TIN.—There is no change in this metal, and tin shares have been generally weaker, and less dealt in. Carn Brea is quoted 52½ to 55; Dolcoath, 52½ to 55; Cook's Kitchen, 3 to 3½; East Lovell, 2¼ to 2⅜. Botallack, 90 to 100; at the meeting in Cornwall the accounts showed a profit on three months working of 373*l.*, and the balance against the mine is reduced to 2535*l.* North Levant, 4 to 5; this mine we hear is making a regular profit, and may soon enter the Dividend List. Wheal Owles, 110 to 120; the mine is looking better. East Pool, 19 to 21; Penhalls, 1½ to 2; South Condurrow, 13 to 14; South Frances, 11 to 11½; Tincroft, 15 to 16; West Basset, 11 to 11½; West Frances, 11 to 12; Wheal Agar, 5½ to 6; Wheal Basset, 3 to 3¼; Wheal Grenville, 5 to 5½; Wheal Kitty (St. Agnes), 2½ to 3; Wheal Peevor, 16 to 17; Wheal Uny, 1½ to 1⅝.

COPPER MINES.—At the Cornish Ticketing, on Thursday, the standard advanced 2*l.* 8*s.* per ton; the average price of the ore sold was 3*l.* 17*s.* 6*d.* per ton. It is generally thought that copper will still advance considerably. West Tolgus, 26 to 28; at the meeting in Cornwall the accounts showed a profit of 152*l.* on two months' working, and a credit balance of 1218*l.* No dividend was declared. The ores sold and credited in the accounts realised 2819*l.* The accounts are charged to Sept. 12. The ores sold and to be credited at next meeting realised 2819*l.* 5*s.* 5*d.*, and the costs, it is expected, will be less than the last. Wheal Crebor advanced on Friday to 6⅛, 7. The 120 end east continues worth 80*l.* per fathom; same end west, 70*l.* per fathom. The new lode at the 108 east has improved to 20*l.* per fathom. In the cross-cut at the 48 there are spots of ore, but no lode met with at present.

Devon Great Consols, 4 to 4⅛; the accounts to be presented to the meeting on the 26th show a credit balance to Oct. 31 of 2880*l.* 0*s.* 2*d.*, as against 1661*l.* 2*s.* 6*d.* at the corresponding period of 12 months ago. The receipts for copper ore for the six months were 10,521*l.* 19*s.* 6*d.* for 4989 tons. The amount received for arsenic, 6000*l.* 9*s.* The reserves of copper ore in the mine are estimated at 27,299 tons; arsenical mundic, 22,000 tons. The sale of ore on Thursday (885 tons) realised 2307*l.* 6*s.* 6*d.* South Caradon, 55 to 56; the sale here (430 tons) realised 2683*l.* 6*s.* Marke Valley, 22*s.* 6*d.* to 27*s.* 6*d.*; the ore here (220 tons) sold for 787*l.* 2*s.* 6*d.* North Penstruthal, 1 to 1¼. Parys Corporation, 16*s.* to 18*s.*; more branches of ore are being intersected in the 90 cross-cut south, and patches of copper are appearing in the forebreast. Hingston Down, 10*s.* to 12*s.*; at the meeting, the particulars of which will be found in another column, a call of 1*s.* per share was made. East Caradon, 2¾ to 3; Mellanear, 4 to 4½; New Cook's Kitchen, 6½ to 7; East Crebor, 20*s.* to 25*s.*; West Seton, 47½ to 50; South Penstruthal, 15*s.* to 20*s.*

LEAD and SPELTER are both firm, and advancing, and lead mines have been more dealt in than for some time past. Van, 21 to 22; no change here. Roman Gravels, 11 to 11½; the points in operation are yielding as usual for lead, and 25 tons of blende have been sampled. Tankerville, 5 to 5½; no change reported here. East Roman Gravels have sold 25 tons of lead ore for 289*l.* 7*s.* 6*d.*, and 20 tons of blende for 94*l.* 10*s.* Pateley Bridge, 12*s.* 6*d.* to 15*s.*; the 40 west, on Rake vein, is worth 4½ tons of lead per fathom; the 40 east, 2 tons. West Pateley, 2½ to 2¾; the lode in the 56 north-west has further improved, worth fully 5 tons of lead ore per fathom. Grogwinion, 3⅛ to 3⅜; this mine has sampled 100 tons of lead ore, for sale on the 26th. East Van, 2½ to 2¾; Aberllyn, 10 to 11. D'Eresby Mountain have been in request, and advanced from 25 to 30, 35.

Clementina, 1 to 1¼. Glenroy also enquired for at 10*s.* to 15*s.* Gorsedd and Merllyn, 1½ to 2½; Great Laxey, 18 to 19; Herodsfoot, 2½ to 2⅝; Leadhills, 3⅜ to 4; Minera, 11 to 13; North D'Eresby, 1 to 1⅛; Pandora, 10*s.* to 15*s.*; West Assheton, 2 to 2½; West Chiverton, 3⅝ to 4¼; West Wye Valley, 12*s.* 6*d.* to 17*s.* 6*d.*; Wye Valley, 12*s.* 6*d.* to 17*s.* 6*d.*; West Holway, 1 to 1⅛; Caron, 2 to 2½; Crosswood, 1 to 1⅛; Frongoch, 3¼ to 3⅜; Hartington, 1⅛ to 2; Mawston, 1½ to 2; Red Rock, 1¼ to 1⅜. South Darren, 2⅜ to 3; the accounts made up for the meeting show the profit for October was 357*l.*, and the credit balance 1329*l.*, exclusive of the copper not yet sold, and we hear that it is likely a dividend may be paid in January. Gwernymynydd, 5 to 5¼.

FOREIGN MINES.—Blue Tent, 2 to 2⅛; Cape Coper, 31 to 32; Canada Gold, 1⅛ to 1⅜; Chontales, 7*s.* 6*d.* to 10*s.*; Colerado, 1⅝ to 1¾; Don Pedro del Rey, 14*s.* to 16*s.*; Eberhardt and Aurora, 3¼ to 3½; Flagstaff, 1 to 1⅛; Frontino and Bolivia, 2⅛ to 2⅜; Santa Barbara, 40*s.* to 45*s*, The advices this month show a profit of 775*l.* 13*s.* 6*d.* for the month of September. The gold produced, 4148 oits., is estimated at 1762*l.* 18*s.*; costs, 987*l.* 4*s.*; Missouri, 10 to 12; Javali, 8*s.* to 10*s.*; Last Chance, 15*s.* to 20*s.*; New Quebrada, 3¼ to 3⅜; Panulcillo, 4¼ to 4⅜; Richmond, 9 to 9½; Tecoma, ⅛ to ⅛; Placerville, 2⅜ to 3; Ruby, 3¼ to 3½; Hultafall, 1¾ to 2.

The Market for Mine Shares on the Stock Exchange has been decidedly less active during the week, but prices, on the whole, are well maintained. That the great inflation of the last few weeks would continue could scarcely be expected, the rise of price in many cases being far greater than was at all justified by existing circumstances. An interesting table has been prepared by the West Briton, comparing the market quotations for 28 mines on Aug. 11 and Nov. 8 respectively, from which it appears that the rise has been equal to 595,929*l.* The quotation for Botallack has increased nearly five-fold on 22*l.*; Wheal Uny is quoted 14 times the August price; Wheal Owles 5½ times; Wheal Kitty, 6 times; Carn Brea 3 times; Wheal Basset 7 times; and most of the other mines mentioned about double the August price. This indicates a state of affairs which, although the result may have been satisfactrry to certain speculators, can scarcely be regarded as beneficial to mining, since it shows a greater attention to the shares than to the mines; so that the steadiness during the week may be considered to be an improvement, as shareholders may find time to think of the mines. An objectionable feature is being revived in one or two cases of pretending to indicate the value of mines by stating the aggregate value of the workings or ends. Nothing can be more delusive, and unless investors be well on their guard they are likely to suffer from it. By an almost obsolete and vicious practice the value of the mine was indicated by stating that the workings or the ends were worth 200*l.*, 300*l.*, or some other sum per fathom, which was meant to imply that if every working place was advanced 1 fm. the estimated value of the ore to be obtained would be 200*l.*, and so on; but the delusion arises from the fact that the cost of removing the ground not being stated, nor even the number of working places; follows that there may be 100 ends worth 2*l.* per fathom each, and costing 7*l.* per fathom to work, and assuming the rate of working to be 1 fm. per week there would be an actual loss of 500*l.* per week.

But not unfrequently the delusion is worse than this, for the investor, having been deceived into purchasing shares because the value of the ends being stated at 200*l.* looks encouraging, is further victimised by being frightened into selling a short time after, because the aggregate is said to have fallen to 100*l.* per fathom, whilst the mine is really in an improved condition, or at least undeteriorated. The estimates of 70*l.*, 80*l.*, or more per fathom for ends previously worthless may have been fallacious, though many other poorer ends may be working at a profit, so that in the first case the mythical value of the property has been raised upon a mere, and too often intentionally erroneous, estimate of one or two ends, and in the second is depressed by an alleged change in but one or two ends, the deception being passed over unnoticed, because the estimates of the remaining ends are fairly accurate. Where there is no intention to deceive this system of aggregate estimation is now seldom practised any more than the equally objectionable, if not actually fraudulent, system of stating the value at (say) 60*l.* per fathom when the quantity of ground in which the 60*l.* worth of mineral is estimated to exist is neither the cubic fathom nor the fathom run for the area of the heading, but a mass of indefinite height upon a square fathom base, whence the real value may not be 60*l.*, but 20*l.* or 12*l.*, per cubic fathom. If investors were less subject to deception, and were treated in a more straightforward manner, they would much more readily lend their support.

On the Provincial Share Markets there has been scarcely so much business doing, but the prices of iron, coal, and manufacturing companies' shares continue to improve, and the quotations for Cornish and other copper, tin, &c., mines have been fairly maintained. On the Manchester Stock Exchange yesterday business was done in

Darlington Iron at 8⅜ dis.; in Ebbw Vale at various prices between 11 and 10½ dis.; in Tredegar Iron at 9 dis.; and in West Cumberland at 7⅜ dis.

The prospects of tin mines would seem to be encouraging, for an Amsterdam metal, broker at present in London, states that large orders from America have already come in for the Banca tin to be sold at auction in Amsterdam on Thursday next. He is, consequently, impressed with the belief that another rise in tin after the sale is likely to occur.

Devon Great Consols, 4¼ to 4⅜; the month's sale of copper ore on Thursday brought a better price, realising 2307*l.* The half-yearly report of the directors, notwithstanding the low price of copper, must be exceedingly satisfactory to the shareholders, and no doubt, from all that can be learned near the mines, good dividends may be resumed next year. A large number of shares are said to have recently been purchased for parties in the neighbourhood of the mines.

Crebor, 6½ to 7; it is stated that a large number of shares have recently been borrowed, and that before these are re-delivered or made good to the lenders the price may gradually move up to their old price of 10 or 10½, altogether irrespective of the value or prospects of the mine. The sampling of copper ore next week and the price at which the ores will realise may, it is thought, rather astonish some parties, and the profit arising thereon may enable the company to declare a dividend.

East Crebor, 1 to 1⅛; the purser has furnished no details as to whether the 600*l.* is all the cash that will be at the disposal of the adventurers for working capital and to pay for the necessary machinery for carrying on the mine. The public have assuredly the right to know what plant and machinery is on the mine (even assuming that nothing has been or will be charged for the mine, and that the conveyance will be at the cost of the donors of the property), and what is the consideration for which the transfer thereof to the company is made or to be made; as otherwise *bona fide* investors might find calls necessary sooner than they anticipate, which, with the unlimited liability that the Cost-book System involves, some might object to.

Missouri (Lead), 10 to 10½; it is reported that arrangements have been completed at the mines for the erection of a powerful Cornish pump, to replace the pump formerly in Master shaft; this pump will drain the entire northern portion of the mines, and will greatly facilitate the operations now being carried on.

Canada (Gold), 1½ to 1⅝; the returns of gold reported are:—July, 11 ozs. 1 dwt. 12 grs.; August, 21 ozs. 2 dwts. 14 grs.; September, 67 ozs. 1 dwt. 18 grs.; October, 126 ozs. 12 dwts. 23 grs., showing a gradual increase in the produce obtained in opening up the property. The Chairman is still on the property, and has been empowered by the board to organise all future working arrangements.

Richmond, 8¾ to 9¼, ex div.; the usual telegram from the mines at Eureka, states that the weeks run was $43,000, from 743 tons of ore. During the week the refinery has produced doré bars to the value of $40,000. The mine is looking well. The manager (Oct. 28) writes that operations in the mine have been carried on vigorously, and with good results. The 500, north from No. 12 chamber, has been advanced 15 ft. in very good ore, and from the present appearance of the end it promised to open out to a good chamber; the ore is of good quality, and very compact. The machinery both in mine and smelting works is in good working order. The furnaces are doing good work, and smelting large quantities of ore. No. 4 furnace is smelting refinery by-products.

Ruby, 3½ to 3⅝; it is reported that work has been commenced on the Bullwhacker Mine, where the great deposits of smelting ores exist. The operation of clearing up at the Dunderberg is proceeding more rapidly than was at first anticipated. Prospects at the Home Ticket and at the other parts of the mines are considered to be of a highly satisfactory character.

The Tolima Company directors' report for the meeting on Dec. 3 has been issued. The balance shows a credit balance of 6070*l.* 16s. 9d., but this is produced by including on the other side of the account unsold ore 15,284*l.* 5s. 7d., and shares held on trust 1035*l.* The estimated working profit was 11,513*l.* 2s. 11¾d. (there is nothing like estimating closely) at Frias, and 172*l.* 8s. 3d. at Allo; but in profit and loss account 600*l.* is charged for directors' fees, 611*l.* 13s. 3d. for salaries, office expenses, &c., and 615*l.* 0s. 3d. has been written off for expenditure at Organos, deterioration of machinery, loss on stores, &c.—so the actual estimated profit on 12 months is 4344*l.* 14s. 3d. The directors report that, though it has been deemed requisite to write off large amounts under the various heads of machinery, stores, and mineral estates accounts, a balance remains to the credit of profit and loss account adequate to the application of a sum of about 4000*l.* to the payment of a dividend of 7s. 6d. per share on the "A" capital of the company, being the amount accrued in respect of the 10 per cent. dividend receivable in the year 1873-4, which the directors propose to distribute after the meeting. As the report of Mr. Gledhill, the company's superintendent, is brought down to the end of July, whilst the returns given in the accounts necessarily extend to May 31 only, and three subsequent months' return are given, from which it appears that a very considerable improvement has since that period been shown, the working profit being—June, 29*l.* 7s.; July, 1122*l.* 8s. 6d.; August, 2845*l.* 8s. 4d.: equal to 3997*l.* 3s. 10d.

Nouveau Monde, ⅔ to 1; it would be interesting to learn who are dealing at these quotations. The Crédit National of this morning states that it has been for some days past trying to verify these figures in the interest of holders of these shares so long unsaleable, but have not succeeded—seulement, coter est un, et négocier est un autre

The Emma Silver Mine litigation, referred to last week as having recommenced, is going on prosperously. The judgment, noticed as deferred, has been given, and is altogether in favour of the English company, which has now been granted the inestimable privilege of commencing chancery proceedings in the American Courts. The verdict in the action at law already decided against the English company, has left no doubt that the Englishmen have the law against them; but surely there is no reason why they should not have the pleasure of a suit in equity; it puts money in the purses of the American lawyers, and as the English company's expenses are understood to be provided for out of a fund "supported by voluntary contributions," the subscribers pay their money and get their amusement in return. As there is some connection between law and equity even in the United States, it may be pretty safely predicted that those who proved themselves entitled to a verdict in the Common Law action will be equally successful in the suit in Equity. Should not Mr. MacDougall, in his letter in another column, have said that the present judgment "authorises the company to seek relief," instead of "maintains the company's right of relief" in equity? Anyhow it would probably ensure defeat still more certainly if it were attempted to reopen the question of fraud after it has been decided that there was none at Common Law.

In Lead Mines shares the large amount of business noticed last week has been more than maintained; indeed, the transactions of the last five days have been as numerous as those which for some time past have taken place in a fortnight, and there is a very general opinion that, to judge from the information received from lead and lead ore buyers, both at home and abroad, even better prices than at present will soon be obtainable. Leadhills, 3⅜ to 4½; the mines are reported to have further improved, and the returns of lead ore are increasing

Tankerville, 5½ to 6; the mines are reported to be opening out well. The new part recently started, called "Pump Sump," continues to look well, and is a fine course of lead ores, worth fully 3 to 4 tons per fathom.

Gwernymynydd, 5 to 5¼; from one bargain in the lower flat the agent expects to raise 20 tons of lead this week. This company's group of mines are said to be proving rich beyond all expectation.

Mineral Corporation, 12 to 13; the issue of the 2000 shares is reported to be progressing satisfactorily, whilst at the mines everything is going on well. Capt. Bennetts reports that at the No. 5, or Great d'Eresby deep adit (cross-cut to the Fuchaslas lode), the boring machines continue to work well, but the ground remains very hard, consequently the progress has been slower this week. By the appearance of the end of the adit this (Nov. 20) afternoon, he thinks they will make better progress next week. For four days' working the adit has been advanced 1¾ fms. On the two other days they were putting in tramroad and repairing. At surface they will commence crushing with the new crusher, and preparing for market the ores they have in stock on Wednesday next. All their other dressing machinery is in full working order.

North Hendre, 7 to 7¼; ditto, 1*l.* paid, 2⅜ to 3; the report and accounts presented at the general meeting, of which a report appears in another column, were of the usual favourable character. The profit on the twelve month's working (including 109*l.* 18s. 1d. undivided Sept., 1878) was 1370*l.* 8s. 7d. Of this balance interim dividends have been paid amounting to 20 per cent., and absorbing 726*l.* 14s., leaving 1109*l.* 14s. 7d. available for further dividends. It is mentioned in the directors' report that the success of the Halkyn District Mines Drainage Company being of so much importance to this company, in connection with the drainage of the Great Hendre sett, the directors subscribed for 200 shares of 10*l.* each, with the authority of the general meeting in Nov., 1878. The directors report the completion of the purchase of the East Hendre Mine for 250 paid-up shares of 2*l.* 10s. each, and this is charged under the head of the company's property. The mine is looking as rich as at any former time, and all the additional drivings and workings continue to develope rich ore ground. The new pulsometer pump on the washing-floors is doing its work well. Capt. Goodman Ellis further reports yesterday that the vein of lead discovered in No. 2 shaft continues to improve, being now 18 in. wide of nearly solid lead extending across the shaft. The mine throughout looks exceedingly well, and is likely to continue so. The new machinery on surface is also working well.

Frongoch, 3¼ to 3½; good accounts continue to be received. The blende deposits are yielding well, and the high price of spelter and zinc is very beneficial to the company in causing blende to be in good demand at remunerative prices. Grogwinion, 3½ to 4; there have been 100 tons of lead sampled, for sale on Wednesday next. Mine doing well. Caron, 2 to 2½; the shaft is to be pushed down for deeper levels forthwith. Prospects of good discoveries in depth said to be encouraging. Wye Valley, ¾ to 1; the reconstruction of this company is likely to be carried out successfully. West Wye Valley, ¾ to 1; the prospects are stated to be steadily improving. Red Rock, 1¾ to 1¾; cheering accounts come to hand from the manager, who is making good progress at the mine in all important points. Crosswood, 1 to 1⅛. Mawston, 1½ to 2; a further issue of capital has been decided upon.

The subjoined is the list of the closing quotations:—

Devon Great Consols, 3¾ to 4¼; East Caradon, 2⅝ to 2⅞; East Van, 2 to 2½; Gwernymynydd, 4 to 4¼; Great Laxey, 18 to 19; Hingston Down, ⅜ to ⅝; Leadhills, 3½ to 4; Marke Valley, 1½ to 1⅝; Pateley Bridge, ⅝ to ¾; Roman Gravels, 11 to 11½; Tankerville, 5¼ to 3¼; Tincroft, 16 to 16½; Van, 21 to 22; West Assheton, 2 to 2¼; West Chiverton, 3 to 3½; West Pateley, 2¼ to 2¾; Wheal Crebor, 6½ to 7; Wheal Grenville, 4½ to 5; Almada and Tirito, ¼ to ⅜; Birdseye, ¾ to 1; Blue Tent, 2 to 2½; Canada Gold, 2 to 2⅛; Colorado United, 1⅝ to 1⅞; Don Pedro, ⅝ to ⅞; Exchequer, ¼ to ⅜; Flagstaff, 1 to 1¼; Frontino and Bolivia, 2½ to 2¾; Hultafall, 1¾ to 2; Javali, 5-16ths to 7-16ths; Kapanga, ½ to ¾; New Quebrada, 3¼ to 3½; Pestarena, ¼ to ⅜; Placerville, 2⅛ to 2⅜; Port Phillip, ⅜ to ½; Richmond Consolidated, 9 to 9¼; Ruby and Dunderberg, 3¼ to 3½; Santa Barbara, 2 to 2¼.

At Truro Ticketing, on Thursday, 2079 tons of copper ore were sold, realising 8069*l.* 4s. 6d. The particulars of the sale were—Average standard, 103*l.* 5s.; average produce, 6⅜; average price per ton, 3*l.* 17s. 6d.; quantity of fine copper, 133 tons 10 cwts. The following are the particulars:—

Date,	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Oct. 23...	2687	£98 5 0	6⅝	£3 16 0	11s. 4½	£56 18 0
Nov. 6...	1308	94 1 0	7⅞	4 12 6	11 9½	58 19 6
,, 20...	2079	103 5 0	6¾	3 17 6	12 1	60 9 0

Compared with the last sale the advance has been in the standard 2*l.* 8s., and in the price per ton of ore about 3s. 1d.

GAS SHARES.—The principal business in these shares, according to this evening's report of Mr. W. L. WEBB, of the Stock Exchange and Finch-lane, has been in Bombay (Limited), 6¾ to 6⅝; ditto, new, 4⅞; Commercial, 180½ to 181¼; Crystal Palace, 6 per cent. pref., 122, 120; Continental Union, 19¼; ditto, new, '69 and '72, 12¾, 12½, 12⅜; ditto, 7 per cent. pref., 24¾; European (Limited) 1⅛, 1⅝; Gas, A, 179¼, 180¼, 180⅜ 180⅝; ditto, fourth issue, 17¼†; ditto, D, 10 per cent. pref., 210; Imperial Continental, 191½, 190¼, 192, 192½, 192¾, 193, 193½, 192½†, 193¾; London, 172½, 174†; Monte Video, 14⅞ to 15; Oriental (Limited), 7½, 7⅝, 7¾; ditto, '79, 1⅜, 1 7/16; Para (Limited), 5; Phœnix, 37; ditto, 1876 issue, 35¼, 35¾; South Metropolitan, 196½, 198. († exceptional amount at special price). Gas stocks are firm, esspecially Gas, A, and Imperial Continental. For closing prices see list on last page of Journal.

INSURANCE SHARES have, according to this evening's report of Mr. W. L. WEBB, of the Stock Exchange and Finch-lane, been dealt in as follows († exceptional amount at special prices):—Alliance British and Foreign, 28¾; Anglo-French Fire (Limited), 3½; Commercial Union, 19¾, 19½, 19¾; Home and Colonial Marine (Limited), ¾; Imperial Life, 20½; Indemnity Marine, 97½; London and Provincial Marine, 4¼; Law Life, 13 to 12⅞; Marine, 84; Maritime (Limited), 5; Ocean Marine, 7¾, 8¼, 7¾, 8⅛, 8⅜, 8¼; Royal Insurance, 22¾ to 22⅞; Universal Marine (Limited), 10½ to 10⅝. Phœnix dull, and sellers. Others firm, especially Commercial Union and Ocean. For closing prices see list on last page of Journal.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. ABBOTT, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

A petition for the winding-up of the Dominion of Canada Plumbago Company (Limited) is to be heard on Nov. 20.

A petition for the winding-up of the Rounds Iron and Limestone Quarries (Limited) is to be heard on Nov. 22.

A petition for confirming a resolution of the General Mining Association (Limited), for reducing the capital from 274,690*l.* to 219,752 has been presented to the High Court of Chancery.

The Tolima Mining Company's accounts for the year ended last May show a balance sufficient for the payment of a dividend of 7s. 6d. per share on the A capital of the company, being the amount accrued in respect of the 10 per cent. dividend receivable in the year 1873-4, which the directors propose to distribute after the meeting.

RHOSESMOR AND PEN-YR-ORSEDD.—The results of the drainage by the Halkyn Tunnel to these two properties are invaluable, and a large produce of ore is expected. These two mines possess the champion lodes of the district, and are expected to turn out great prizes.

GREAT HOLWAY.—The drainage of this property proceeds very satisfactorily. Great results are expected.

PANDORA.—An important improvement is reported in the 33 fm. level on the new lode, which is now yielding some very nice lead and blende, and likely to further improve. The stope north of No. 1 winze is worth 1½ ton of lead and 1½ ton of blende per fathom.

NANT RHYS SYNDICATE.—A limited company under this title has been registered for developing the Nant Rhys mining sett, the extent of which is 3 miles by 1 mile broad. The property adjoins the celebrated Cwmystwith and Lisburne Mines, the lodes of which pass through the property. The Cwmystwith and Lisburne lodes have yielded upwards of 2,000,000*l.* worth of lead each, and in addition to these lodes there are five others traversing the sett. Mr. A. E. Walton is the engineer, and Capt. Wm. Michell, F. T. Kemp, and others have reported in high terms upon the merits of the property. The company proposes to open the lodes, and when sufficiently proved to dispose of or work them as may be most advantageous to the interests of the shareholders.

WHEAL PEEVOR.—This mine continues to open up wonderfully well. At the last meeting about 190 tons of tin were sold, at an average of about 40*l.* per ton, and a dividend of 16s. per share, or 2400*l.*, was declared, but should the present price of 50*l.* per ton continue the profits of the next account will probably ensure a dividend of close on 30s. per share, thus showing what our best Cornish mines can do with tin even at 50*l.* per ton.

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THE CREBOR DISTRICT.—Having our own independent agents we can furnish reliable information respecting mining properties in this neighbourhood on our usual terms.

TAMAR MINE.—This mine is in the same district as Crebor, and shares should be bought at present low price.

BODIDRIS MINE.—Splendid specimens of ore from the Maes-y-pwll lode, just received, may be seen at our office.

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Llanrwst Ordinary...	£ ¾ ... £1¼	Tamar	£1¼ ... £1½
do 10 p. cent. Pref.	2 ... 2¼	South Wheal Crebor	1 ... 1¾

WANTED, 700 BODIDRIS Shares, for cash, in one lot. State lowest price. Dealers and others wishing to buy or sell shares in the above will find it to their advantage to communicate with—

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Can do business on most advantageous terms in the following Shares:—

20 Arendal.	45 Flagstaff, £1 7s. 6d.	Rhydalun, £11.
75 Bodidris, £1¾.	30 Great Holway.	Richmond, £9¼.
Bryn Glas, £1½.	10 Hultafall.	Roman Gravels, £12.
3 Carn Brea.	50 Killifreth, 3s. 6d.	Sentein, £2½.
90 Chapel House, £1¾.	5 Leadhills, £3½.	Tamar Silver-Lead, 30s
100 Don Pedro, 12s. 9d.	60 Morfa Du, 15s.	West Chiverton, £5¼
32 East Van, £2 10s.	105 Parys Mountain, 20s 6	Wheal Crebor, £5½.
15 Eberhardt, £3¼.	50 Pant-y-Mwyn, £2¼.	

BRYN GLAS.—We are prepared to purchase these shares at £1, and sell at £1½.

GOLD MINES.—Don Pedro, Pestarena, and St. John del Rey shares should be purchased.

SENTEIN.—This is considered to be one of the richest lead mining properties in Europe.

BANKERS: LONDON AND PROVINCIAL.

FOR SALE:—

100 East Crebor.	5 D'Eresby Mountain.	100 Hultafall.
100 Bettws-y-Coed.	200 Tyn-y-Fron, 7s. 6d. pd.	50 Parys Corporation.

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Kangaroo Tin Works, Sydney, 21st May, 1879.

Mr. E. JACKSON,

Associate of the Royal School of Mines,

ANALYST AND ASSAYER,

Assays or Complete Analyses made of Copper, Silver, Lead, Zinc, Tin, and other Ores. ASSAYING TAUGHT.

106, QUEEN VICTORIA STREET, LONDON, E.C.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER, 29, BISHOPSGATE STREET, LONDON, E.C.,

Can SELL the following SHARES at prices annexed:—

50 Bedford United, 9s. 3d	25 Gawton Copper, 13s.	100 Pestarena, 6s. 9d.
25 Colorado, £1⅞.	25 Glenroy, 15s.	75 Port Phillip, 9s. 6d.
20 Devon Consols, £4 8 9	20 Herodsfoot, £2 11s. 3d.	10 Roman Gravels, £11½
50 Don Pedro, 14s.	30 Hingston, 11s. 6d.	150 Rossa Grande, 3s.
20 East Caradon, £2 17s. 6	50 I.X.L., ⅜.	15 South Darren, £3 1s. 3
25 East Crebor, £1 5s.	20 Leadhills, £3 17s. 6d.	30 Tamar Silver-Lead.
15 East Lovell, £2¼.	20 Marke Valley, £1 7s. 6	50 Tecoma, 7s. 6d.
20 East Van, £2½.	10 Nouveau Monde, 17s. 6	20 West Chiverton, £3¾
20 Eberhardt, £3 13s. 9d.	15 Panulcillo, £4 12s. 6d.	20 West Pateley Br., £2¼
25 Flagstaff, £1 8s. 9d.	25 Pateley Bridge, 15s. 6	25 Yorke Pen. (pref), 19s

BWLCH UNITED MINES—SPECIAL BUSINESS in these shares.

MR. T. E. W. THOMAS, STOCK AND SHARE DEALER, 3, GREAT WINCHESTER STREET, E.C.

The following are prices at which business can be done:—

	Buyers.	Sellers.		Buyers.	Sellers.
D'Eresby Mountain	£35	£40	Marke Valley	£ 1¼	£ 1⅜
East Caradon	2¾	3	Parys Corporation	16s.	18s.
East Crebor	1	1⅛	South Crebor	1	1⅛
East Lovell	2¼	2½	South Darren	2¾	3¼
East Van	2½	2¾	Tankerville	5¼	5½
Flagstaff	1⅛	1⅜	Wheal Crebor	6¼	6½
Herodsfoot	2½	2¾	Wheal Jane	4½	5

Friday Evening, November 21st, 1879.

N.B.—Special Business in EAST CREBOR, SOUTH CREBOR, and TAMAR SILVER-LEAD.

MR. W. TREGELLAS, 19, BISHOPSGATE STREET WITHIN, E.C.,

Deals in all descriptions of MINING SHARES at close market prices, and has special business in various Brazilian Gold Mines.

W. TREGELLAS recommends for a good rise the SANTA BARBARA GOLD MINE. Investors may see at his office the latest reports showing the progress of the concern, in which large dividends are being earned, and one will shortly be declared for the half-year ending June.

JOHN B. REYNOLDS, STOCK AND SHARE DEALER, 37, WALBROOK, LONDON, E.C.

ESTABLISHED 20 YEARS.—BANKERS: LONDON AND SOUTH-WESTERN.

FOR SALE—CASH—20 South Aurora, 3 Carn Brea, 23 East Caradon, 30 Wheal Kitty (St. Agnes), 10 South Condurrow, 10 South Crofty, 20 South Frances, 40 West Basset, 10 Wheal Peevor, 100 West Kitty, and many other valuable shares.

Mr. REYNOLDS is also instructed to BUY 250 West Kitty shares, or any part. Sellers will state lowest price—net cash.

PENNINGTON AND CO., SWORN BROKERS, 3, ROYAL EXCHANGE BUILDINGS, E.C., Transact business in every description of Stocks and Shares.

ESTABLISHED 1869.—BANKERS: ALLIANCE.

MESSRS. EKINS AND CO, STOCK AND SHARE DEALERS, 14, QUEEN VICTORIA STREET, LONDON, E.C.

BANKERS: METROPOLITAN.

NORTH D'ERESBY MOUNTAIN LEAD COMPANY (LIMITED).

The BEST and CHEAPEST INVESTMENT now before the Public.

Copy of Reports of Special Surveys by several eminent Mining Engineers may be had on application to the UNDERSIGNED, who invite enquiry, and confidently recommend the PURCHASE OF SHARES at par—£1 each, fully paid.

BRITISH and FOREIGN MINES and all other negociable SECURITIES BOUGHT and SOLD at net prices free of commission.

BEAZLEY AND CO., STOCK AND SHARE DEALERS, 9D, NEW BROAD STREET, LONDON, E.C.

Established over Twenty Years.

MR. CHARLES POWELL, 11, WARNFORD COURT, THROGMORTON STREET, advises the PURCHASE of EAST CREBOR shares at £1 to £1 10s. This is the adjoining mine, and on the identical rich lodes as Wheal Crebor, the shares in which have advanced from 5s. to £6½, £7, during the last six months. It is not generally known that East Crebor has produced some of the richest yellow copper ore in England, one parcel of which realised the high price of £26 15s. per ton.

Mr. POWELL has business in EAST CREBOR shares as buyer or seller at the above quotations.

TO INVESTORS IN MINES AND INDUSTRIAL COMPANIES.

MR. THOMPSON, of 145, UNION STREET, PLYMOUTH, is now issuing a Pamphlet, which will prove to be the most important Guide and Instructor to SPECULATORS and INVESTORS. To ensure an early delivery, enclose One Stamp.

TO INVESTORS.

CREBOR AND EAST CREBOR MINES.—These shares should be bought for permanent investment. Large reserves of ore are being opened up in the former, and the lately discovered new lode, with an aggregate value of nearly £250 per fathom for five points of operation, passes into the adjoining Mine—East Crebor. Large purchases of East Crebor Shares have been made during the week—at present prices, 25s, to 27s. 6d.—and they are especially recommended for a speedy rise in price.

Particulars and plans of J. SCOTT and Co., Palmerston Buildings, Old Broad-street, E.C.

THE ROMAN GRAVELS MINING COMPANY (LIMITED).

Notice is hereby given, that the TRANSFER BOOKS of this company will be CLOSED from the 1st to the 8th proximo, both days inclusive.

F. F. WILSON, Secretary.

30, Finsbury Circus, London, E.C., 21st November, 1879.

SHAREHOLDERS of the CONSOLIDATED AMADOR VOLCANO HYDRAULIC MINING COMPANY are hereby notified that at the forthcoming STOCKHOLDERS' ANNUAL MEETING the following will be submitted for their adoption:—

1.—To revise the constitution and bye-laws of the company.

2.—To declare a dividend out of its earnings.

3.—To increase its capital stock from one million dollars to ten ($10,000,000) millions of dollars, divided into 100,000 shares of $100 each.

4.—To exchange certificates of old shares for new ones, at the rate of ten new shares of $100 each, for each old share of $100.

Stockholders only whose shares have been deposited by them, or by their proxies, with the Secretary ten days previous to the date of the annual meeting, will be entitled to vote.—San Francisco, Oct. 27, 1879.

Notices to Correspondents.

COPPER PRODUCTION.—"G. C. M." (Ann Arbor).—The annual production of copper in South America, South Africa, Spain, and Australia is at present—Chili, 49,000 tons; Spain and the Mediterranean, 29,208 tons; Australia, used for Colonial and British consumption, 8861 tons; Australia to India, 4500 tons; Cape, 3800 tons; Betts Cove and Canada, 2800 tons; New Quebrada, 1750 tons; Norway and Sweden, 550 tons=100,269 tons. The production of Great Britain was sold at the Cornish Ticketings, 3337 tons (3617 tons in previous year); British sold at Swansea, 413 tons; private sales, estimated, 100 tons=3840 tons. It is not practicable for us to give any estimate of the extent to which the output could be increased at pleasure, but it may be assumed that in every case the production is at the minimum, as during the long depression there has everywhere been an effort to keep down the quantity sold. To state the nature of mineral raised, and character of deposit, is equally difficult without particularising the mines, which would fill a volume. Even "G. C. M.'s" description "Native copper in red jasper gangue, bed 14 ft. wide, conformable with strata no sign of thinning out in either length or depth, country rock amygdaloid trap overlying sandstone and conformable, dip about 30° north-west," would scarcely be applicable to the whole of the United States, nor to the whole of the district in which the one mine mentioned is situated; and many districts are more varying than the copper districts of Michigan. As "G. C. M." is familiar with Ireland, England, and France, it would be interesting to learn how he would briefly remark upon those countries, so as to give as good an idea of their copper deposits as is conveyed in his observations with regard to the United States that "the rock is crushed and concentrated and in part smelted at the mine, but smelted principally at Detroit. Not much loss now in tailings." The official returns of the industries of the several countries would probably give the details required, but there would be considerable labour in collecting, translating, and epitomising them.

R.—Could any reader oblige by informing me, through the Journal, whether the undermentioned companies are still in existence, and where I could obtain any information respecting them—the Pinto Silver Mining Company, the Basye Silver Mining Company, the Planet Tin Mine, the Nova Scotia Land and Gold Crushing Company, the Chancellorsville Freehold Gold Mining Company, the Australian Consols Gold and Copper Mines—application at the respective offices having failed.—F. W.

CORNWALL GREAT CONSOLS.—Observing the report of the meeting of the above company, inserted in the Journal of the 8th inst., I should be obliged if any of the subscribers, or those interested in the company, would send me the present residence or place where Mr. C. Helden and Mr. James Smith, merchant, can be found, as I wish to communicate with them. The two gentlemen are stated to have attended the meeting.—FRED. WARWICK: 25, *Bucklersbury, Nov.* 18.

MINES AND MINERALS IN AUSTRIA.—I should be glad if any of your readers could tell me where I can obtain the Official Returns of the names of mines and minerals they raise in Austria; and if they are contained in any books, the title and publisher would oblige—GEO. C. BLACKWELL: *Liverpool, Nov.* 18.

STEAM TRAMWAYS.—"H. D." (Peckham.)—The only obstacle to the introduction of steam traction on tramways is that the Act of Parliament at present in force renders it impracticable, except for a few hours before midnight and a few after, and then very few people are travelling. By an energetic effort the repeal of the Act could no doubt be secured, as modern steam-engines are certainly more under control than horses, and can now be made to work quite noiselessly. Steam tramcars are already in use in Paris, Rouen, and elsewhere, and at Paris the water is heated, though no fire is carried by the locomotive, and the line has some heavy gradients.

GOLD IN INDIA.—There seems to be much difficulty in obtaining any reliable information with regard to the gold fields of India, but from all I can gather the deposits are rich enough to pay for working, but there are no facilities for working them. What has become of the Glasgow company that was stated to have been formed on the ashes of the bankrupt firm of Smith, Fleming, and Co.? Have they commenced work or have they got possession of the property? If so, when may reports of the progress made be expected? In my opinion, capitalists should be very cautious in parting with their money until much more is published to the world. Those who trust to the semi-secret information now being given by vendors will assuredly regret it hereafter.—ANGLO-INDIAN: *Nov.* 19.

MINERAL WEALTH OF INDIA—G. H. C. (Fyzabad).—We shall be glad to find space for the communication you propose, and for the insertion of which no charge whatever will be made. There can be no doubt that English capitalists would, as you suggest, be willing to provide funds for the development of the mines of India if they only had full details concerning them; but there has always been too much apathy on the part of Europeans who have acquired mineral property in India, the too general practice being to neglect giving any publicity to the facts concerning the position, character, and extent of the district in which the mines are found, or as to the facilities for working, such as price of labour, means of communication, quantity and nature of water available, and so on. The result of this apathy is that when the owners come to England to negociate for the development they can find no one who knows anything about it or will believe their glowing statements concerning it without time for consideration and enquiry, consequently the business is not carried through, and the owners return to India disheartened—and perhaps half ruined—by their heavy expenditure and waste of time. We are at all times willing to afford the necessary publicity to descriptions of mining districts when we have evidence of the position and reliability of the writer.

ELECTRIC SAFETY-LAMPS.—Several references have recently been made in the *Mining Journal* to Dumas and Benoit's electric safety-lamp, which is described as a modified Geissler tube. Will some correspondent state whether the tube is a vacuum tube, or whether it has any special gas or fluid in it, and if so, what fluid? Also, whether a series of lamps can be placed on one circuit, or whether each requires a separate circuit?—COLLIER.

AIR-COMPRESSING AND ROCK-BORING MACHINERY.—Can any correspondent kindly furnish me through the Journal with the result actually obtained by himself at a mine, and when out of the influence of the manufacturers, with air-compressing and rock-boring machinery. I should desire to know the cost of (say) three drills (so as to be prepared to have one in hospital) capable of putting in 3-ft. holes 1½ in. in hard granite; what size compressor, and cost of it, would be wanted to keep two drills constantly at work, the end averaging 100 fms. from the compressor—perhaps 150 fms. should be provided for; what would be the cost of the tubing—150 fms.—complete; how much horse-power (indicated) will the compressor consume; and what is the average cost per month for repairs of drills and compressor? This may appear a long series of enquiries, but I am anxious to get machinery introduced against some opposition, my colleagues fearing the first cost and cost of maintenance, and declaring that twice the manufacturer's estimate for installation and first year's working seldom covers the actual outlay. One more question, which is rather for a manufacturer—In how short a time could such a plant as that indicated be delivered on a London or Manchester railway?—DIRECTOR.

Received,—"P. T."—"H. S."—"Shareholder" (Wheal Crebor)—"B. R. N."—"D. C. D."—"M. G."—"W. W. B.": Next week—"F. J. K."—"E. M." (Dublin) should write to the secretary at the offices of the company, Austinfriars, London—"L. S. D."—"Shareholder" (Wheal Kitty)—"Shareholder" (Lossiemouth)—"C. T." (Wendron Mines)—"Reader" (Leeds)—"H. S." (Wolverhampton): We think so—"M. B. G." (Newcastle): The MS. refered to has not yet reached us—"An Anxious Shareholder" should have appended his name to the letter respecting United Van Consols and Glyn Mining Company—"W. W. B." (Whitehaven): Next week.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, NOVEMBER 22, 1879

THE CLEVELAND INDUSTRIES.

The history of the rise and progress of the Cleveland ironstone field, and the trade immediately associated with it, has been frequently given, but other important sources of industry have been developed of late years within the same area that have not as yet met with the attention they undoubtedly deserve. It is, however, true that the iron ore found in such vast quantities in the district has been the foundation of the other industries that have sprung into existence during the last 20 or 30 years. Despite the great fluctuations which have taken place of late years in all branches of the iron trade Cleveland has maintained its position, and increased its production, with the exception of 1878, when the demand for manufactured iron was so unsettled. Great changes, too, have taken place with respect to its value, which fell between 1873 and 1877 from 5s. 6d. to 3s. 6d. per ton, whilst last year it only averaged about 3s. 3d. per ton. It must, however, be stated that a large percentage of the ore raised is consumed in the furnaces belonging to the mineowners, some of whom also import Spanish stone to mix with that found in the locality. Some of the mines from various causes have been closed, for whilst in 1871 there were 21 mines in operation, and 36 in 1877, yet in 1878 there were only 29 working; and this year, so far, there is barely the same number, the Carl Cliff and How Mines belonging to Messrs. BELL BROTHERS having been standing for several months at least, as well as the Locketts and Whitecliff Mines of Messrs. PEASE, the East and West Rosedale Mines, belonging to the Rosedale and Ferry Hill Company, the Port Mulgrave and Grinkle Mines, near to Saltburne-on-the-sea, the property of Palmer's Shipbuilding Company, together with the Spa and Lane Head Mines, consequently the probability is that the output for the present year will not exceed that of 1878, if it comes up to it, although the last quarter of the present year will be the best. But the productive power of the mines is considerably in excess of what is likely to be required for some years, for some new fields of stone have been opened out of late. The supplies may be said to be inexhaustible, and from a calculation made by Mr. I. LOWTHIAN BELL he states it would take all the coal in Durham and Northumberland to smelt the ironstone in the Cleveland Hills, so that the coal will be spent long before the ore, seeing that but a comparatively small quantity of the former is used for smelting, the bulk of it being exported abroad, and absorbed for various purposes at home.

The production and value of the stone raised in the various mines during the last few years was as follows:—

		Value.
1871	Tons 4,581,901	£1,144,974
1872	4,974,950	1,863,081
1873	5,617,013	1,688,099
1874	5,614,322	1,694,918
1875	6,121,794	1,222,358
1876	6,562,000	1,162,020
1877	6,284,545	1,021,238
1878	5,605,640	910,739

Of the quantity raised last year 732,139 tons came from the Upleatham Mine, belonging to the Messrs. PEASE; 557,982 tons from Eston, the property of BOLCKOW, VAUGHAN, and Co.; and 481,631 tons from Brotton, near Saltburn, where the ore is worked by HARRISON and Co.

The make of pig-iron during the early part of this year was very moderate, and it may be said that it is only within the last two or three months that there has been a material improvement. But the enterprise of the North of England ironmasters, and the practical and chemical knowledge they have brought to bear on all matters that relate to the economical production of raw iron, has been such as to entitle them to the thanks of those in other parts of the country. If we leave out of the question the new and valuable process for making steel direct from Cleveland iron, there are others that entitle them to more than ordinary consideration. They have shown that pig can be produced at a much less expenditure of fuel than formerly. Not so many years since 70 cwts. of coal were required to make 1 ton of pig, now the quantity ranges from 41 to 43 cwts. Messrs. HOPKINS, GILKES, and Co. (Limited), of the Teesside Ironworks, Middlesborough, were the first in Europe to adopt the Danks furnace, or rotary puddling apparatus, making homogeneous iron exclusively from forge pig-iron, which was found to be equal in quality to the West Riding or Staffordshire. The rails and other manufactured material were made direct, the whole process being continued from the puddling machine to the finished product without more than a waste heat before rolling off. By the process the iron was considered better than previously made in Cleveland. All appears to be agreed that the iron from the Danks furnace was in every way superior to that produced by hand-puddling. But returning to pig-iron, we find that the production in the Cleveland district, which includes the furnaces connected with the mines, has not advanced during the last year or two, the output for the last few years having been—

1868	Tons 1,233,418	1874	Tons 2,001,233
1869	1,459,508	1875	2,047,763
1870	1,695,377	1876	2,075,565
1871	1,884,239	1877	2,109,020
1872	1,968,972	1878	2,018,765
1873	1,999,491		

BOLCKOW, VAUGHAN, and Co. are the largest producers of pig, having 14 blast-furnaces, whilst Messrs. BELL BROTHERS have 12 at Port Clarence. In 1876 out of 158 furnaces erected 111 were in blast, as compared with 159 built and 116 at work during the previous year. In 1877 there were 159 furnaces, but only 116 were at work, whilst in 1878 out of 165 only a hundred were in operation. With the vast supplies of ore and iron the growth of the finished iron trade was comparatively slow for a considerable time, so that with a few mills in 1850 there were barely 300 puddling furnaces going, whilst in 1862 there were only 650. Now, however, there are about 85 mills and upwards of 1100 puddling furnaces going. But, of course, there are a great many that have been idle. Rails have long been one of the great staple industries of the North of England. Great attention has been devoted to their production, and even ordinary iron rails have been made by Mr. BELL that would stand three or four times the breaking strain required by the North-Eastern and other railway companies. It is also evident that the Cleveland ironmasters are likely to add new branches to those they have been engaged in, so that as plates, iron and steel, are now being more extensively used than ever for shipbuilding they will be rolled at the Northern mills for the works on the Tyne, Tees, &c., for they can be delivered much cheaper than those made in Yorkshire or any other part of the kingdom, for which heavy carriage rates have to be paid to the Northern yards. Cleveland also promises to be one of the principal seats of the steel rail trade, owing to its advantageous position, and the fact that the iron can be dephosphorised and taken direct from the blast-furnace to the Bessemer converter. Thus the loss of the iron rail trade will be more than made up by the demand for those made of steel. Indeed, the iron rail is undoubtedly doomed, for last year the make in Cleveland was not more than 20,000 tons, whilst now, under the Thomas-Gilchrist process alone, more than 2000 tons are being turned out weekly. The complete transition from iron to steel is, therefore, all but accomplished, and this is only what might be expected, for we are told that by the new process the steel rails are turned out with one-fifth the amount of human labour that was hitherto expended upon those made of iron, whilst the durability of the former is several times greater, and can be turned out at a price fully as low as was charged a short time since for those made of the inferior metal. Of the makers of steel BOLCKOW, VAUGHAN, and Co. have extensive works at Eston, where there are four Bessemer converters, with a capacity of 8 tons each. There are several furnaces, each about 72 ft. in height, each equal to the production of nearly 500 tons of Bessemer per week. Six hot-air stoves on Godfrey's system are attached to each furnace, each having 2000 superficial feet of heating surface.

From the last of the row of furnaces to the first of the Bessemer converters the distance is not more than 33 yards. The converters are placed on a platform about 12 ft. from the ground, and in the centre there is a hydraulic ram used to lift the ladle to a level with the converters. None of the work is done below the level of the floor, an arrangement which is evidently on the right side of economy, seeing that by the ordinary mode of casting the ingots in pits the expense and loss of time incurred in the lifting of the ingots out of the pits are avoided. After leaving the converters the ingot of steel is heated in one of SIEMEN'S regeneration furnaces, and then taken to the rolls. The company have been turning out large quantities of rails for a considerable time past, and it is said to be the intention of the directors to extend their operations by producing steel plates, which are fast superseding those made of iron for several purposes, more especially shipbuilding. The Clarence Ironworks of Messrs. BELL are on a most extensive scale, and no doubt will be adapted for steel making and rolling. The works now produce at the rate of 250,000 tons of pig yearly, the ore coming from their own mines, whilst they have several collieries from which they can draw a million tons of coal annually. A considerable proportion of the coal is converted into coke for the furnaces. The firm obtain plenty of limestone for fluxing from their own quarries, so that having all the essentials for making pig belonging to themselves they are able to produce iron as cheap as any establishment in the kingdom, and much lower than the majority of them. That the Cleveland district is likely to attain a much higher position for its iron and steel—great as that has been—we think will be evident from the few details we have given concerning it.

But there is another industry which has been called into existence during the last two or three years in connection with the ironworks in Cleveland, which is likely to become an important one—the utilisation of the furnace slag. At the Tees Ironworks, Middlesborough, bricks are made from the slag, as well as cement. There are several machines, and each is capable of turning out 10,000 bricks daily, of which large quantities are sent to London, where they realise a price that leaves a fair profit. The bricks being pressed are uniform in size and thickness, less in weight than the ordinary red brick, and none are broken. For inside work they effect a marked saving both in laying and mortar, whilst they have the still farther advantage of becoming harder the longer they are kept. Near to the same establishment are the Cleveland Slagworks, where the slag is ground into powder, and then, being well damped with water, passed into the brick-press without any admixture of lime or anything else. The slag is also made for other purposes in addition to building bricks, such as shingle for concrete, and for gardening and agricultural purposes; whilst, as we showed a short time since, a good deal is being used for the making of glass bottles and slag wool for the covering of steam-boilers.

But there is another industry which is likely to take root before long in Cleveland, and to become a source of profit, finding employment for a large body of workmen. We allude to the rock-salt met with at Middlesborough in a bore-hole put down by Messrs. BOLCKOW, VAUGHAN, to a depth of about 500 yards. The rock-salt at Middlesborough is considered by many geologists to be identical with that of Cheshire. Gypsum is the usual accompaniment of rock-salt, and on the Cleveland hills, further on the dip than where the bore-hole was made, gypsum has been worked, so the probability is that the salt will be found to extend over a considerable area of ground. With the chemical works to the north, where large quantities of salt must be absorbed, the developing of that found in Cleveland could not fail to meet with a ready and near market, and so add to the other industries which have placed the district in the high position which it has so long held, but which is still increasing in importance.

OUR COAL ABROAD.

Our coal exports have made a further unchecked progress this year. The shipments of October were 1,471,171 tons, as compared with 1,310,821 tons in October, 1878, and 1,283,208 tons in October, 1877; while in the ten months ending Oct. 31 this year the aggregate deliveries over sea were 13,732,010 tons, as compared with 13,258,519 tons in the corresponding period of 1878, and 13,181,103 tons in the corresponding period of 1877. The demand for our coal has been increasing this year in Russia, Germany, France, Spain, Italy, and British India, the increase in the case of France being especially marked and continuous. We have said that the exports to Oct. 31 this year were 13,732,010 tons; but to this we must add 3,672,658 tons in respect of coals shipped for the use of steamers engaged in the foreign trade. The whole quantity of coal dispatched from our shores to Oct. 31 this year was thus 17,404,668 tons; and, assuming that the deliveries continue at the same rate in November and December, the whole quantity of coal sent abroad by Great Britain in 1879 will be 20,885,600 tons. In 1869 the corresponding exports were 10,744,945 tons. We thus arrive at the remarkable fact that our coal exports have very nearly doubled during the last 10 years. This progress is rendered all the more noteworthy by the fact that the great advance which occurred in coal six years since ought, one would think, to have given a decided stimulus to coal mining in various parts of the world possessing dormant mineral resources.

We have more than once called attention to the continued progress noticeable in the demand for English coal in France. For the last 30 years the French have been discussing the importance of turning their native coal to more account, and it is a fact that those 30 years have witnessed the opening out of the important French coal mining basin of the Pas-de-Calais. But notwithstanding all this, and notwithstanding a very sensible increase in the production of coal in France during the last 20 years, the French are continually importing more and more English coal. Time was, and not so very long ago either, when France was contented with an importation of 1,000,000 tons of English coal per annum, but in 1879 the imports will reach an aggregate of upwards of 3,000,000 tons. Thus in the first ten months of 1877 we sent the French 2,493,315 tons of our coal, while in the corresponding period of 1878 the corresponding imports were 2,544,422 tons, and in the corresponding period of 1879, 2,719,827 tons. The imports will be seen to have expanded to the extent of nearly 10 per cent. during the last ten years, and they were still growing in October, having amounted in that month to 296,672 tons, as compared with 267,432 tons in October, 1878, and 279,613 tons in October, 1877.

The great and progressive decline which has been taking place in the price of coal during the last year or two is illustrated by the fact that the value of the 13,181,103 tons exported from the United Kingdom in the first 10 months of 1877 was 6,738,295*l.*, while the 13,732,010 tons exported in the first 10 months of 1879 represented a value of only 6,020,801*l.* It is probably this decline in prices which has stimulated the consumption of our coal in the miscellaneous markets of the world. A people like the French, looking closely after their francs and centimes, are especially likely to have purchased freely this year on account of their being able to purchase cheaply. The increased activity of the iron trade in England and Scotland may possibly exert some influence upon the external demand for our coal, as if prices should rise to any sensible extent the temptation to foreigners to make purchases would be much reduced. However, by way of a set-off to this consideration, we may remark that if the iron trade is active in Great Britain it is likely also to be animated in the leading European countries, and coal may in that case also become dearer upon the markets of Europe.

MINERS, AND THEIR LEADERS.

The position of the miners' leaders in several districts has been of late a trying one for them, seeing that those who have long acted upon their advice have turned round and determined to arrange disputes without them. The leaders who at one time controlled thousands of men, and whose words were listened to with breathless attention, are now scarcely ever heard of. If we take the Coal Miners' Associations, with one or two exceptions, perhaps, we find that the members are not a tithe of what they once were, and that even these are greatly dissatisfied. Men belonging to them have gone on strike, expecting to receive a sufficient sum weekly to keep themselves and their families, but have found at the end of the first week that there were no funds in hand from which they could be paid. Seeing misery and starvation before them, they have been obliged to resume work on the best terms they could. This was the case in South Wales, where, after great privation, the men had to succumb, and since then we are not aware of there being any organisation in the southern part of the Principality that can be termed a Miners' Association. And this state is likely to be the case with respect to South Yorkshire, which at one time could boast of about the most powerful organisation in the kingdom so far as coal miners were concerned. Several hundreds of them have been on strike for some weeks, and after paying for years to the Association find that the money has gone to pay officials and sundry expenses for objects which have done them no good. In one case the men last week made great exertions to raise money from any and every quarter, and so far were their efforts successful that at the end of the week there was a sufficient sum in hand to pay the married men 1s. each, and single men 10d. each.

In the same district of South Yorkshire one of the leading officials of the Association has been smitten with Mr. MACDONALD'S panacea for raising miners' wages and the price of coal at the same time—restricting production. He lately wrote to Mr. MACDONALD on the subject, and that gentleman, in replying from Welhall, denied the statement that the rise in the price of iron had anything to do with the advance of the miners' wages, made a few weeks since at some collieries in Lancashire. He stated—"The ironmasters have now given their men all 6d. per day of advance truly because of the restriction. Merchants saw that the produce of 27 furnaces being taken out of the producing power the iron must go up in price. The panic seized them, and now iron is selling at 11s. per ton more than it did four weeks ago, and the men have got 6d. on the day. The action of the iron market is the most conclusive evidence of the wisdom of the policy of restriction when the market is overstocked. Your wars will continue so long as you produce to depress the markets." Unfortunately for Mr. MACDONALD and his clientele in Scotland his opinions and advice have not turned out altogether correct, for we find that on the 7th inst. there was an important meeting of coal and iron masters in Glasgow, when it was unanimously agreed that there should be a reduction in the miners' wages of 6d. a-day. It had been found, it was said, that with the too hasty advance of wages and increase in the price of coal the effect had simply been to drive away the demand to other districts, the export trade from the Clyde having almost wholly collapsed. Such we have frequently pointed out would be the case with respect to limiting the production of coal, or where

one district advancing wages increased the price of coal to a point beyond what it could be obtained in other localities. There was no chance for the Scotch coalowners obtaining an advance in the price of the produce of their mines when coal was so plentiful in all parts of the kingdom, and the productive power of the collieries so much in excess of the home and foreign requirements. But they have now realised the fact, and find that if they are to do any business they must get the men to return to their former wages. Even Mr. MACDONALD, when appealed to by the men after the decision of the coalowners was made known, advised them to do all they could to avoid a strike. Even with a rising market, and iron going up as it was, reminding them that the winter was coming on, and too many families, even at present, were in want. He advised them to go to their masters and ask them to withdraw the 6d. reduction, and then if they refused to follow the advice of their delegate. The latter we should say was anything but consolatory to the men and their families.

An attempt, however, has been made to introduce the restrictive policy into South Yorkshire by Mr. FIRTH, the friend and familiar of Mr. MADCONALD, and one of the secretaries of the South Yorkshire Miners' Association. But the good sense of the men of the district has been too much for the sophistry of the secretary. The latter, in putting the matter before the miners, remarked that if they acted as a vast company "you can make your position better. Only look at the fact that there were 59,951 miners in Yorkshire in 1878, and if they were to produce (say) one ton less per man per day there would be 59,951 tons less, and one ton per man for four days would give 299,755 tons, or considerably more than a quarter of a million tons less of coal would be thrown upon the market, which would have a tendency to create a more healthy tone, and especially so if every district would take the matter up." Decidedly so; if every person was of one mind what wonderful things could be accomplished. But if Mr. FIRTH's policy were carried out the result would be to throw the trade that was lost owing to restriction into other districts where the men were not so foolish as to attempt the carrying out of an impracticable and suicidal policy. Mr. FIRTH might also take it as a fact that increasing the price of coal would soon lead to a sensible diminution of our exports, to the great advantage of foreign and American colliery owners. However, Mr. FIRTH's proposal was sent to all the lodges for their opinion as to what should be done concerning it. The result was that the men employed in nearly all the large collieries of the district gave the proposal a most decided negative. Mr. FIRTH has the option of resigning, whilst the Association is on its last legs, divided by internal dissensions, and a cry for its remodelling on a plan that will not allow the executive the handling of the money of the members. We think it is plain that miners' leaders in all parts of the country are fast losing whatever power has been allowed to them during the last few years, and that their services are now held at a heavy discount where they once were held in the highest estimation.

EMMA SILVER MINING COMPANY.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—The directors wish to announce that they have received from their agent in New York a cablegram to the effect that after long arguments by counsel and a prolonged consideration by the Judge, judgment has been delivered in the American Equity Courts in favour of the company, upon a motion by the defendants which involved the crucial point of the right of the company to rescind the contract of sale as against the actual vendor—the Emma Company of New York—and to seek relief against Park and Baxter for breach of trust as directors of this company.

The pleas which the defendants wished to set up were—

1.—That the company by attempting at Common Law to enforce damages for fraud against Park and Baxter, arising out of that contract, had exercised election, and consequently could not now rescind the contract.

2.—That the verdict of the jury in the Common Law action being in favour of Park and Baxter, the matter was *res adjudicata*, and could not be re-opened.

3.—That the company by laches and acquiescence were estopped from further proceedings.

The effect of the judgment of the Court overruling these pleas is to maintain the company's right of relief in equity.

ALEXANDER W. MACDOUGALL,
Queen Victoria-street, Nov. 21. Chairman.

GOLD IN INDIA.—For some time past considerable interest has been felt by the readers of this Journal with regard to the progress made with the development of the gold discoveries in South-East Wynaad with which Mr. Harris's name is so honourably connected. The description of the district has already been published, and it has also been noticed that an influential company had been formed in Glasgow to take over and work extensive properties there. It appears that in this arrangement the position and rights of Mr. Harris have not been sufficiently recognised, the result being that he has had to apply to the Court of Chancery to enforce his rights. There was at first some question as to whether the Court had the necessary jurisdiction, but this having been decided in the affirmative the case—Harris *v.* Fleming and others—was again heard on Nov. 13, before Vice-Chancellor Hall. The object of the suit was to obtain an injunction preventing the Indian Gold Mines Company (Limited) from working or otherwise dealing with the South-East Wynaad properties in which he is interested without his sanction, and in the result the injunction was granted as prayed for the defendants (the company) being ordered to pay 10,000*l.* into Court, together with all moneys subsequently payable by the company, under their agreement with the vendors.

AUSTRALIAN GOLD MINING.—The reports from several mining districts in the colony of Victoria give encouraging accounts of the operations of September. A striking instance of the good luck which occasionally falls to individual miners was shown in the month in the case of four men who were working the St. Mungo claim, Sandhurst, and paying the owners of the mine a certain percentage on the gold obtained for the use of the mine. These men, in a drive at a distance of about 60 ft. from the surface, came upon a rich spur of quartz, from the first ton of which they obtained the extraordinary result of 255 ozs. of gold. Two loads crushed shortly afterwards gave 191 ozs., and 10 tons from a lower level yielded 50 ozs., making altogether 496 ozs. of gold from 13 tons of quartz. Out of that the fortunate four divided 1400*l.*, besides paying 500*l.* tribute to the proprietors of the mine. A week later they had another surprising yield of 255 ozs. of gold from 2 tons of quartz and an equal quantity of debris from the floor of the drive. The Melbourne Argus states that it is not, however, such successes as this so much as the improved prospects of some of the large gold-bearing mines of Sandhurst that have given renewed hope to the miners, mineowners, and business people of the district. At the alluvial diggings at the Whipstick, a place near Sandhurst, a nugget of gold weighing 40 ozs. was found by a lucky digger 6 in. below the surface of the ground. The finder, for obvious reasons, declined to state the locality where he obtained the nugget.

AMERICAN IRON TRADE.—A decided lull has occurred in the market for pig-iron, which may be called almost weak and unsettled, with prices tending downward. At Philadelphia the scarcity of iron for immediate delivery enables sellers to maintain prices, but sellers are undoubtedly much more eager to seeure contracts than they were, and buyers have much less difficulty in placing their orders. The Pittsburg market is somewhat feverish, operators declaring that prices must soon decline, while most of the trade consider that current rates will be maintained, and perhaps even exceeded. The feeling against further importations of British iron is gaining ground, the manufacturers being of opinion that it has not been satisfactory for mill-use, and that it is too "cold short," as iron containing phosphorous is apt to be. In these circumstances, they naturally prefer to use the native iron, which they have all along bean using, and which suits their purpose better than an unknown and doubtful iron. At Chattanooga the market for pig is weaker, and the least pressure would soon bring down prices; and the same may be said of Boston, where the buoyancy of the last few weeks has given place to a lessening of confidence, though as the leading makers have the production under control for some time to come, there is as yet no material decrease in the strength of the market. Similar conditions, though not so strongly felt, prevail at Louisville, Baltimore, Richmond, and St. Louis. At the present time there are 337 furnaces in blast in the United States, against 347 out of blast, though in point of capacity the numbers are on the side of the furnaces in blast—61,391 tons, against 49,410. At the commencement of this year there were only 267 in blast and 433 out of blast, so that the present revival of the iron trade has given life to 66 fresh furnaces. The following table shows the exact condition from 1877-79:—

	In blast. Oct. 1. 1877.	Oct. 1. 1878.	Oct. 1. 1879.		Out of blast. Oct. 1. 1877.	Oct. 1. 1878.	Oct. 1. 1879.
Charcoal ...	89	83	97	Charcoal.....	176	186	159
Anthracite ...	86	88	128	Anthracite ...	140	135	98
Bituminous...	77	80	112	Bituminous...	136	133	90
Total	253	251	337	Total	452	454	347

IMPROVEMENT IN THE NORTH WALES SLATE TRADE.—The slate quarries at Llanberis have much improved lately. At the Upper Glynrhowy Slate Quarries, belonging to Messrs. Adams and Barker, at the lart monthly letting all the quarrymen were put on full time, orders for slates being plentiful.

NORTH WALES SLATE TRADE.—After a long period of almost complete stagnation, a slight improvement is perceptible in this, the staple industry of North Wales, as shown by the increased shipments at Portmadoc, the chief outlet for the Festiniog quarries. Notices have, however, been posted at the Welsh Slate Quarry, one of the largest in the Principality, notifying a reduction of working days to four weekly, a change rendered necessary by the late heavy fall of debris into the workings. At the Penrhyn and Llanberis quarries the output is still limited to four days per week, and in consequence of the fall from the mountain, which has blocked some of the workings in the former quarry, 50 bargains, representing about 3000 quarrymen, will have to be abandoned at the next monthly letting.

THE SKERNE IRON COMPANY.—We understand that a scheme will shortly be made public which has for his object the revival of this company. The features of the scheme are not yet made known, but it is believed that they comprise a plan for securing the interests of the shareholders. The Skerne Company, whose works are at Darlington, failed at the time when Hopkins, Gilkes, and Co., and Messrs. Lloyd suspended last summer, and since that time the plant, which is considered to be some of the best and most modern in the North of England for the purpose of producing plates, has been lying idle. The company in its best days employed above 1000 hands, and even down to the time of its stoppage had a considerable number going. The revival of the iron trade, and especially the advance of 2*l.* in the prices of plates, encourages the idea that the works could be re-started with advantage. A firm of London financiers, who also have something to do with the revival scheme, some time since offered the creditors 15s. in 1*l.*, which the great majority took. A few, however, held out, and they have lately been paid 20s. in 1*l.*, even in one case where the liability was about 3000*l.* This has cleared the way to a re-starting of the company, and it is hoped that no long time will elapse before the works are again busy in manufacturing ship-plates, which just now are in such great demand. The shares of the company, which lately stood at *nil*, being all paid up, are now at 3*l.* in the local share lists.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Nov. 20.—The meetings of the trade to-day and yesterday were very firm. Pig-iron was in demand beyond the supply. Such a condition of affairs has not been known in the South Staffordshire district for five years. To rectify this preparations continue to be made in various localities to increase the output, alike of high-class and medium and common quality pigs. Purchasers were offering 2*l.* 15s. for Staveley pigs, but could not get them. Orders for this brand of iron, amounting to considerably over 1000 tons, were on offer in Wolverhampton yesterday. Clay Cross pigs were equally scarce, although 2*l.* 16s. was offered. Finished iron of most descriptions is in good out-turn, and some works which by setting all sail can turn out 500 tons weekly have orders on their books amounting to nearly 4000 tons. Notwithstanding this activity there are leading iron merchants who report themselves as much less active than a fortnight or so ago. Sheets are hardly in so good demand as of late. The new prices of Messrs. Millington and Co., of Tipton, for bars is 8*l.* as a minimum. Their best bars range from 9*l.* to 12*l.*, and their sheets from 10*l.* to 11*l.*

Coal is stronger than last week, and an advance of from 6d. to 1s. on that period is being asked by some owners. The market has been strengthened materially by the business outcome of the conference early in the week between Mr. Fisher Smith, chairman of the Coalmasters' Association, and the colliers' delegates, upon the wages question. Mr. Smith explained to the men that a rise in coal would probably take place on Dec. 1; that if this was the case no further conference would be necessary, as wages would naturally go up; but he promised that if coal should not rise as intimated a meeting of the association to consider the men's request should be called. The market was not prepared to learn that so early an advance in coal as was foreshadowed was contemplated.

Some little difficulty has arisen touching the notice which the ironworkers have served for an advance in wages, Mr. Joseph Chamberlain, M.P., the arbitrator to the board, is about to make a lengthened tour on the Continent, hence he cannot hear the men's claim. It is believed, however, that either by the appointment of a temporary arbitrator or by some other means the difficulty will be got over.

At the adjourned inquest upon the bodies of the six men who were killed on the 13th inst. at No. 4 pit of the Pelsall Coal and Iron Company, at Short Heath, Mr. Wynn, the Inspector of Mines for the North Staffordshire district, who had descended the shaft, gave it as his opinion that there was not half enough air in the pit. He believed that the explosion occurred by the accumulation of gas in the sump below the scaffolding. The jury returned a verdict that the explosion was accidentally caused, but that Mr. Michael Harle, the company's certificated manager, was to blame for neglecting to provide additional air-pipes. The negligence was not criminal.

WATER IN THE PUDDLING FURNACE.—At the South Staffordshire Mill and Forge Managers' Association monthly meeting, a paper was read by Mr. William Yeomans, of Messrs. Kingsley and Sons, Netherton Ironworks, near Dudley, entitled, "What effect does water have upon iron in the puddling process?" There was a good muster of members. The author dwelt in an effective manner upon the practical bearing of water on a "heat" of puddled iron. Referring to the power of destruction of water, he pointed out that water, applied to a new furnace bottom made from scrap, rendered it rotten and prevented its lasting half its legitimate time, and that the ball furnace tap, cooled by water, would not stand the fire like one that had been allowed to cool gradually. The practice pursued by the puddler, of taking cinder from his bosh and putting it into the furnace round a bit of old iron to help to bring the change quicker to the boil was, he held, a practice that should on no account be allowed. For this mixture, technically known as the "rodney," would soon eat away the bottom plates. The cause of this he believed to be that the hot cinder became so overcharged with oxygen by reason of its contact with water that it was robbed of too much of its carbon, leaving it very much poorer than it otherwise would be. The quality and quantity of the yield were both alike reduced by the application of water. As a substitute it was proposed that a sufficient quantity of hammer slag should be charged into the furnace. Provided there was a well constructed damper on the stack to reduce the temperature, an improved yield would result, for the oxide in the hammer slag would act through the iron instead of on the surface only, as water did when thrown through the stopper hole. The quality of the iron would be improved, for the putting of slag into the furnace in fair proportions and at the proper time would produce a healthier boil, rendering it unnecessary to get the iron to that excessive heat in the boiling or "sibbering" or "stewing" process. It too frequently happened that the puddler made the mistake of charging a good fair heat with an in sufficient amount of cinder, then he resorted to water to help him out of the difficulty. Water did help him out of the difficulty; but it was at the expense of his employer. Mr. Yeomans regretted that much hammer slag should be conveyed to the blast furnace, for he felt that that which should help to fill the warehouses with good saleable iron was going to help to make a class of pig which never did anything to maintain the reputation of South Staffordshire. An instructive discussion ensued upon the reading of the paper in which Messrs. Rigby, Harris, Millard, Ellis, and others took part. It was a unanimous opinion that water had a very deleterious influence upon iron, and its total rejection in connection with the boiling process was deemed to be essential to the producing of a high quality of iron.—*Wolverhampton Chronicle.*

REPORT FROM CORNWALL.

Nov. 20.—These are decidedly uneventful times. Hardly a single incident of any special importance in relation to mining matters is transpiring, and all that we can say is that the position already won is being maintained, and that in several quarters steady progress is being made. The Mining Share Market is not characterised by any undue excitement, but a large and sound amount of business is being transacted, and the character of many of the purchases made point to a large outlay by way of investment on the part of gentlemen largely interested in the tin trade. This is a most satisfactory augury for the future, and although opinions differ as to the probability of a future rise in the tin standards this year, there is a growing belief that this will be the case, and for ourselves we think that the balance of probabilities are decidedly in favour of such an advance. Meanwhile the somewhat uphill work of resuscitation is going on in many directions, and the long decadent Helston district is again beginning to show signs of life. It is stated that Basset and Grylls is to make a fresh start. Further west we learn that Providence Mines are likely to come to the front once more. Goole Pellas is extending operations towards Wheal Buzza. Wheal Emily Henrietta has also fair prospects of a new lease of life. Indeed there is not a mining district of any importance in the county which cannot point to its resuscitation, and new ventures either launched or *in posse*. It was hoped that by this time the Perran Iron Mines would have made a fresh start, but hitherto this has been delayed, and we see it stated that Mr. Roebuck, the late purchaser, has disposed of them at a profit on his purchase of 5000*l.* This may or may not be so, but there is no doubt whatever that these Perran Mines are a valuable property, and must come to the front sooner or later. Probably the revival of trade has not yet gone so far as to render it desirable to start an undertaking of this magnitude, and in the meantime Mr. Roebuck has been very ill.

The new railway schemes for Cornwall and Devon are not in the aggregate of any great importance. Year by year the November crop of projects seeking parliamentary authorisation has been falling off, and now they affect only a few localities. The most important scheme launched from Cornwall is the Helston Railway, to start from the Gwinear-road Station on the West Cornwall line, and to be worked as a part of the Great Western system, though made independently. In Devon the chief scheme is one for the construction of a line between Totnes and Paignton, thus avoiding the detour of Newton Abbot from all traffic between Torbay and the West. Beyond these two points the salient features of the notices which have been given are for remedying abandonments in connection with the Devon and Cornwall and the Teign Valley Railway. There are a good many other authorised ventures which are likely ere long to share the same fate. Of the new projects, it will be seen that the only one which affects mining interest is the line to Helston, which may help to wake up that locality.

TRADE OF THE TYNE AND WEAR.

Nov. 19.—The Coal Trade has been much disorganised this week owing to the want of tonnage; heavy storms in the North Sea have seriously retarded the movements of shipping, and in consequence many of the collieries have only been partially worked. The steam coal works in Northumberland have only been partially employed from this cause. The closing of the Baltic has also had an injurious effect, but it is expected that there will be an increased quantity of work during the present week at the steam coal works as the weather has moderated, and a considerable number of steam and sailing vessels have arrived.

The most important event in connection with the coal trade is the adoption of a sliding scale for the Northumberland collieries. An important meeting of the committee which has been appointed by the Steam Collieries Defence Association and the Northumberland Miners' Association was held in Newcastle on Saturday, when the conditions of the new sliding scale were definitely agreed upon, and were signed by the representatives of the two associations. The principal provisions are to the following effect:—The prices of coal in the month of November, 1878, to be ascertained, and compared with the prices of coal in September, October, and November, 1879, and if found equal the basis of the new sliding scale to be the present rate of wages against the present selling prices, but if the prices of the latter period are found to differ from the prices of the former period to the extent of 4d. per ton the wages to be advanced or reduced 2½ per cent. for underground labour, and 2 per cent. for aboveground labour for each and every 4d. per ton of difference found to exist between the selling prices of the former and the latter period. The wages and selling prices to be examined and revised four times in each year, each enquiry to embrace the periods terminating on the last days of the months of November, February, May, and August respectively, and the alterations in wages (if any) to take effect on the first pay after the beginning of the months of January, April, July, and October respectively. When the selling price of coal reaches 6s. 4d. per ton 2½ per cent. for underground labour and 2 per cent. for aboveground labour shall be added to the ordinary advance of 2½ per cent. and 2 per cent., making the respective advances from 6s. per ton to 6s. 4d. per ton, 5 and 4 per cent. for the two classes of labour, all previous advances of 4d. per ton in the selling price to have the ordinary advance of 2½ and 2 per cent. An extra 2½ and 2 per cent. also to be given when the selling price becomes 8s. and 9s. 4d. All 4d. advances between these three prices to have only the ordinary advance of 2½ and 2 per cent. in the wages of underground and aboveground labour respectively. The present arrangement to remain in force for the ensuing 12 months, after which it may be terminated by a month's notice on either side.

The gradual improvement in trade is apparent in these rivers. The iron shipbuilding trade continues healthy, most of the principal yards being well supplied with orders that will keep them busy for some months to come. The Walker Ironworks, the largest establishment of the kind on the Tyne, has been ciosed for a considerable time, but it is expected that they will be reopened shortly. Attempts are now being made to form a company to start them. There are extensive rolling-mills, foundries, &c., here. The Chemical Trade continues to improve, and works that have been standing a considerable time are being taken up and restarted. The East Jarrow Chemical Works are now to be started. There is full employment for chemical works generally, and as stocks are low improved rates are got for most articles in this trade. The increased traffic on the North-Eastern Railway is one of the most certain indications of the improvement in trade, and last week's traffic resulted in an increase of 4733*l.* over the corresponding week in last year. This is the largest increase there has been in any one week during the past two years. The passenger recripts show an increase of 1081*l.*; the merchandise and cattle, 1225*l.* The mineral traffic showed an increase of 1791*l.* The dock dues also showed a marked increase.

We have often noticed in this letter the movement made by the steam colliery owners who have works situated near Blyth to ship coal at that port instead of taking it to more distant shipping places on the Tyne, the object, of course, being to reduce the cost of leadage, which in some cases amounts to from 1s. to 2s. per ton. Some progress has been made in this direction, but not so much as might be expected; the fact is that the diversion of this important traffic from the Tyne to Blyth is against the interests of the North-Eastern Railway Company, and this circumstance prevents to a great extent this change, so much to be desired, being accomplished. The increase of coal shipments at Blyth is comparatively small owing to the cause. Iron shipbuilding was commenced some time ago at this port, and some progress has been made in this branch of business. At present some small vessels are in course of construction, and it is expected that a large screw steamer will be shortly laid down.

In Durham the best gas and coking coal works have been kept fairly going, although the shipments at Tyne Dock have been below

the average, and both imports and exports light, owing to the scarcity of tonnage. Manufacturing coal is more sought after, and there is a much better demand for small coal for calcining purposes, and in some cases this coal has been put up 6d. per ton. The coke ovens are getting much busier. The coke sent to the West Coast from South Durham is estimated at nearly 15,000 tons per week. There is also a better enquiry for Durham coke for South Yorkshire and Lancashire, whilst Cleveland takes a much larger quantity.

The Iron Trade has been, on the whole, rather quiet this week, and prices have not varied materially. The shipments of iron have been small, but several vessels are now loading for America; there is a scarcity of tonnage. The indications for next year are more favourable, trade is increasing fast, and the railway traffic receipts are improving rapidly. Shares of local iron companies are going up. Plates and other kinds of manufactured iron are improving in value.

There was not much change in the market at Middlesborough on Tuesday. A pretty steady tone prevailed, certain of the merchants wishing to buy low, quoted less than 41s. No. 3, but the latter was about the general quotation, with 1s. more for No. 4 forge. Some of the larger merchants ask 41s. 6d. to 42s. No. 3. Makers are firm at 45s. for that quality. The stock in warrant stores shows a material increase, being 91,500 tons on Tuesday as compared with 90,000 tons last Tuesday. There is not much doing in warrants. The shipments of pig-iron last week, though better than in the previous week, were still below the average, the quantity being 13,445 tons. Of this quantity 2525 tons were sent to Scotland, only about half the deliveries for Scotch account which appeared in the corresponding week of the previous year. There are, however, indications that there will be better deliveries for Scotland this week, and also for America. The smallness of shipments is in some measure due to the scarcity of vessels, which have been taken up to meet the requirements of the improvement of trade in various directions. One noticeable improvement in the district has been in connection with the steel trade. At Eston, Weardale, Wolsingham, Guisborough, and other quarters where steel is produced, we hear of considerable activity with work which will last a good while in many cases. The plate trade is more promising than it has been for the last two years, as every week orders for new vessels are reported, and many of the yards on the Tyne, West Hartlepool, and other parts of the district have work which will keep them going for several months. As orders for plates are received the plate manufacturers ask higher rates, and from 6*l.* 19s. 6d. to 7*l.* is the present rate, common bars and angles being 6*l.* 2s. 6d. to 6*l.* 5s., less 2½ per cent. Many of the smaller industries are reviving. The Middlesborough Nut and Bolt Works are reopened. Railway wagon works have more orders. Bridge building is much more active, and foundry work, especially in railway chairs, is brisk. The ironworkers ask 15 per cent. advance in wages. It was stated during the progress of the market that vessels are lying in the Tees waiting to ship 10,000 tons of pig-iron.

Lead Mining in Tynedale.—The Waterhouse Mining Company have driven a cross-cut into a vein which was very rich some years ago. They have not yet seen the whole of the vein; but it is now 3 ft. in width, nearly all lead ore, and hopes are entertained that a rich deposit of ore will be found near the limestone at this point.

On Saturday Major-General Hutchinson, one of the Government Inspectors of Railways, visited the works of Messrs. R. and W. Hawthorn, of Newcastle, and Messrs. Black, Hawthorn, and Co., Gateshead, and examined the new locomotives constructed by these firms for use upon street railways. It is understood that the Inspector will shortly communicate to each firm the weight which he considers it will be safe to put upon the lines, and when an official trial of the locomotives will be made upon the tramway lines.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Nov. 20.—In nearly every part of Derbyshire the signs of improved trade are clearly manifested, and that this is likely to be permanent admits of little doubt. The lead mining districts are generally those that are about the last to feel any change for the better, but they also look more cheering than they did, owing to the recent advance in the price of lead. Some of the mine workers have expressed dissatisfaction with the prices they received for the ore they raised, but of late little or nothing has been heard about it. Some few mines have been turning out a fair quantity of ore, but there is still a considerable number the production of which cannot be said to afford a decent living for those who work them. This is the result of the want of capital, as has so often been pointed out, and will continue to be the case so long as working men without any other capital than their hands seek to become mineowners, which the peculiar mining laws of Derbyshire enable them to be. There are now comparatively few ironstone mines in the county being worked, so cheap can the ore be obtained from a distance, even with the carriage rate included. The consequence is that the ironmasters patronise Northamptonshire and North Lincolnshire instead of working ores at home. Derbyshire pig has sold more freely of late, and at prices that must have returned handsome profits, so that those who have held the largest stocks have been the best off. In manufactured iron a steady business has been done, and the foundries have been working better than usual, but the mills have not been so busy as might be expected. The collieries have been doing well, large quantities of house coal passing over the Midland daily to the South of England, as well as to the West, as far as Bristol and Bath. To London the tonnage recently forwarded has been larger than usual for the season, but so plentiful have the supplies been that the price to ordinary purchasers—barely 1s. in the ton more than what it was in the summer months—and even that difference goes principally to the merchant, where the colliery owner does not sell direct to the consumer, which is only done in few instances. In steam coal the business done has been but moderate, and now the briskest season is over, so that no improvement can be looked forward to unless some more furnaces are put in blast, which is not unlikely to be the case now that the demand for crude iron is so good. Gas nuts are in fair request, and there is a steady demand for coke.

There is more activity at the works in Sheffield than has been observable for a long time, and the number of hands employed is far in excess of what it has been for more than a year. The change is not confined to two or three branches, but appears to be general, and likely to continue. Armour-plates of new construction are now being extensively produced, having a back of several inches in thickness of iron and a face of steel, and some of these have been ordered by the well-known shipbuilder, Mr. Samuda, who is engaged on an armour-clad for the Argentine Republic. Some heavy orders have also been given out for steel plates for ordinary trading steamers that are about to be built of an unusually large size; in fact, makers of cast-steel have of late been much busier than for a very long time past, in one or two instances causing more furnaces to be put in operation. Bessemer steel is also being extensively produced, the consumption on the part of rail makers being not only large but increasing, there being good orders in hand for them for America, India, and other countries. Bessemer steel is also being purchased for wire rolling, as well as for some qualities of cutlery. On Government account there is a good deal doing just now in ordnance at one at least of the principal establishments in the town. Manufacturers of cuttlery are better off, and there has also been some improvement with respect to edge tools, saws, and files. Hematite pig has sold somewhat freely, and prices appear to have become more settled.

In South Yorkshire there are still a large number of miners on strike, but there is some probability of an arrangement being come to at two or three of the collieries, for the men are not in a position to hold out, whilst the masters are desirous of keeping their pits going. At the Swaithe and Edmunds Main Collieries the men and the representatives of the employers had a meeting on Wednesday, so that there is some probability of an agreement being come to.

At the Birley Vale Colliery, near Sheffield, the men have been out for several weeks, and the owners have brought men from Chesterfield every morning to fill the places of the old hands, paying the former from 5s. to 6s. per day. The new haads, however, were asked to go on "piece," the same as at other collieries. This they refused to do, and on Tuesday morning a number of them left the pit, declining to continue at work on any other terms than so much per day.

At the Barnsley Town Hall on Wednesday two miners named George French and Henry Sharp were charged with wilfully rendering useless a door and fence in the Barrow Hematite Colliery put up to keep out some gas which had accumulated. Sharp did not appear, and French was fined 40s. and costs, or two months' imprisonment in default.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Nov. 20.—There is to be an extension of the Cardiff Tramway, of which the Town Council have approved. It is also proposed to connect Merthyr and Dowlais by means of a tram line. Two stokers employed by the Llangennech Coal Company have been fined 5s. and costs for a breach of the Mines Regulation Act. The defendants were fast asleep in the boiler-shed, and the pressure of steam was 5lbs. higher than it should have been. The Iron Trade of the district has not materially altered since last report. At Cyfartha there are prospects of more work to be done. In the beginning of next week sixteen more furnaces for puddling purposes are to be set going. The Ynysfach furnaces will also probably be in work next week. The various works are, generally speaking, better employed; the demand is steady, and apparently a more legitimate and less speculative one. The clearances of iron have not been large, and to India a heavy shipment has been made. Good orders on Canadian account are reported to have been given out, but we have not heard that this district has as yet received any share of those recently placed, Iron and steel rails continue in fair request at late rates, and bars are somewhat more active. Pigs are also active. In the Tin Plate Trade there is a steady demand, and prices rule firm. The men have held a meeting, and seem to have firmly established their Union.

A meeting of colliers has been held at Aberdare. The men. it appears, are still resolved on agitating for more wages. The question of adopting a sliding scale was adjourned till a future meeting. Speaking generally of the Coal Trade, no alteration in prices can be quoted, and consequently the men cannot expect higher wages at present. The inquiry for steam qualities has been fairly brisk, while for house coal the demand is somewhat brisker, The various collieries are well employed and the out-put considerable. Shipments during the last few days have not, however, been quite so large. Patent fuel is a slow sale.

Booker's Works, near Cardiff, are to be soon opened. The liquidators of the West of England Bank and some large shareholders have come to an arrangement for starting the tin-plate works, blast furnace, and forge, by which there will be employment for more than 1000 men. Offers have been made to the liquidators for the works by several persons, but though large they do not reach the amount required the liquidators.

The Queen has conferred the Albert Medal of the Second Class on Charles Morgan, collier, Abercarn. The following is the account of the services in respect of which the decoration has been conferred:—On Sept. 11, 1878, an explosion of fire-damp occurred at the Abercarn Colliery, in the county of Monmoth, whereby 250 persons perished, and on which occasion the greatest possible gallantry was exhibited tn saving about 90 lives. The force of the explosion was terrific, doing great damage to the roadways and to the bottom of the shaft, and setting the coal and timber on fire in several places. Into this state of confusion and apparent danger to life Charles Morgan and certain others without hesitation descended, and although it was discovered that fires were raging in the mine, and that, consequently, the chances of another explosion were considerable, he remained with them at the gallant and humane work of rescue, not reascending the shaft until it was certain that no one was left alive below.

Sir George Elliot, M.P., will in a few days start for Egypt, on a highly important mission. He will represent a group of gentlemen who are so far confident of what the new *regime* can accomplish under the Anglo-French protectorate that they mean to devote some millions of money to certain schemes of industrial and agricultural development in the land of the Pharoahs. Sir George ought to be equal himself to the task of bearing the Turkish financial burdens upon his own shoulders. He is the richest commoner in England, his income being 400,000*l.* per annum.

Mr. Ebenezer Lewis, of Maindee Hall, near Newport, and Mr. J. Cope, of Cardiff, have completed negociatiens with Mr. Crawshay Bailey for working the minerals under Cwtch, Ty'rgwaidd, and Llechau farms, to the extent of about 800 acres, and are to commence sinking operations to the steam coal at once. The output of coal from the Cymner Colliery is daily increasing, the present output being between 800 and 900 tons. The company have arranged to build 220 houses on a field called "The Wern," on the Tynycymmer estate.

Mr. Wm. Williams, of Forest Hall, Morriston, and managing partner of the Worcester Tin-plate Works, as well as the Upper Forest Works, together with some friends, have purchased the Morlais Tinplate Works, Llangennech, and will re-start them at once. The mills will very likely commence turning on Tuesday, and the tinhouse will be in operation next week.—*South Wales Daily News.*

Mining Certificates—South Wales District.—At a meet ing of the board, held at the Town Hall, Cardiff, on Tuesday—present: Mr. G. T. Clark (in the chair), Messrs. Adams, Cardiff; T. F. Brown, Cardiff; E. Daniel, Swansea; D. Davies, Aberdare; Rees Evans, Cwmbwrla; G. Tasker, Merthyr Tydfil; T. Phillips, Aberdare; and the secretary, C. H. James, Merthyr—it was resolved that the next examination for the granting of certificates of competency under the Mines Act, be held at Cardiff on Jan. 27, 28, and 29, 1880.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

Nov. 20.—I propose this week, and on some subsequent occasions, to give a brief description of the works and mines contiguous to the Cambrian Railway, along its course from its northern termination at Whitchurch, in Shropshire, to its southern termination at Aberystwith, in Cardiganshire, leaving the portion of the line running along the coast of Merioneth and Carnarvon to some future time.

At Whitchurch we are geologically upon a small oval-shaped outlier of the lias which has been preserved from the denudations, and that have carried away all the strata of the same age which once connected this outlier with the main belt of the lias, some 60 miles away in Warwickshire and Leicestershire. Around the edges of this liassic outlier crop up the edges of those upper portions of the Keuper beds of the New Red Sandstone, which hold the great salt deposits of Cheshire, and those scarcely worked as yet of this northern corner of Shropshire. Their presence is indicated by the salt springs which here and there bubble up and overflow into the streams. About three miles from Whitchurch we reach Fenno Bank station, where there is an extentive brickwork, with modern plant, and a Hoffman's kiln, and which is doing a successful and lucrative trade. It is the surface boulder clay which is worked, and which here rests upon the red sandstone, which is in its turn overlaid by the great peat deposit of Whixhall Moss. This great moss is crossed by the railway. It is about four miles long by three broad. In the opposition that was made to the Cambrian Railway scheme as it passed through Parliament, very much was made of the difficulty of crossing this moss. The opposing engineers lost their staffs, and nearly lost themselves. Certainly they lost their heads in the coffee-coloured liquid of which, according to them, the moss was composed. Now, this part of the road is as good as any on the line, and it was made without much difficulty by the late Mr. John Ward, of Whittington. For centuries a primitive local trade has been done in the digging and selling of peat from the moss. Then, the numbers of round ovens that we see studded about near the brickworks are the memorials of two attempts that were made a few years since to convert the peat, first into compressed fuel, and secondly into charcoal for steel making, for which purpose the charcoal so made was said to be admirably adapted. I cannot tell why these enterprises failed. Possibly it was not so much from inherent difficulties as from a falling trade, financial difficulties, and others of the evils that beset so many of the schemes of the years 1872-3. From this point to the town of Oswestry there is a marked absence of mining quarrying, or great industrial works, save an agricultural implement manufactory at Ellesmere. But here and there we have glimpses of the stip of the North Wales coal field that was worked lying against the hills that eight miles to the west skirt the Shropshire plain, and meet us near Oswestry.

Standing out on the plain some four miles from the hills is the fine chimney of what was the Ifton Rhyn Colliery, an enterprize that was begun both too late and too soon. Too late, because it was originated as the business activity of a few years ago was just passing its climax, and the promoters had to contend with a relaxing confidence and a tightening money market. Too soon, because the engineering culture of the country is hardly yet certain of the position, if it is really, of the existence of the lower coal in this direction. But the stack marks the site of the coal field of the future, whoever among us lives to see it developed. On our journey to Oswestry we cross more than once the Shropshire Union Canal, a great work 80 years ago, and one that pays still. This portion of it, besides being the great feeder from the River Dee above Llangollen, forms the outlet for the lime and slate quarries of the Llangollen valley, and the collieries of the Chirk district, into the Midland counties, and to the Metropolis itself. The great outdoor industry of the town of Oswestry is its brickyards for the manufacture of bricks from the surface clay, two of which we pass as we approach the town. Here also are the workshops of the Cambrian Railway, stretching alongside of the line as we enter the station. At present these works are in a depressed state, numbers of men having been discharged during the year, and the rest are working short time. Latterly a new industry—the manufacture of hydraulic cement—has been started in the town by Mr. Savin, a gentleman to whom the town and district owes very much. It is said that this cement is manufactured by a process used by Telford in the construction of the canal aqueducts of the neighbourhood at lime quarries belonging to Mr. Savin's grandfather; a siding from the station yard leads towards the works. Few men know how to rest and refresh themselves better than readers of the *Mining Journal*, and probably few men have more need at times of both the rest and the refreshment; so as there is more than one good hostelry in Oswestry it will be a convenient place for us to halt at on our journey.

GENERATING STEAM WITH LIQUID FUEL.

The attempts to generate steam with petroleum or other hydrocarbon for fuel have been almost innumerable, but even with the most promising inventions the failures have always been complete. With an ordinary fireman the idea of keeping up the pressure of the steam has appeared to be altogether hopeless, and in many cases the inventors themselves have been equally unlucky even upon the first public trial of their apparatus. The favourite notion has always been to deliver the hydro-carbon into the furnace in the form of spray,

e pumice stone, asbestos, &c., being used on the fire-bars or their equivalent to prevent the hydro-carbon running together in a mass, and thus interfering with the admixture of the necessary quantity of atmospheric air for supporting combustion. Some of these arrangements have been theoretically promising, but in application have proved most discouraging to the inventors. Many public trials at Woolwich, Deptford, and elsewhere have been attended by the Press and by persons interested in the economic generation of steam, and most of them have been instructive and amusing. Either steam could not be got up at all, or, as in the case of Mr. C. J. Richardson, at Woolwich Dockyard, the result has only been obtained with an enormous consumption of hydro-carbon and with the production of almost solid columns of dense black smoke, which left no doubt that the suggestion was of no industrial value, as it was evident that an enormous percentage of the hydro-carbon which ought to have been utilised for generating steam was being converted into soot in an unsaleable form.

As a matter of fact, hydro-carbons of every kind are most inconvenient forms of fuel, owing to the fact that to secure their proper combustion a nicety, practically unattainable in the supply of air, is necessary. The insurmountable difficulty is that the arrangements require to be varied for almost every temperature of the furnace, and certainly for every kind of hydro-carbon used, so that a furnace which one day, and whilst the inventor is alone, deludes him into the belief that it is perfect, will at a public trial arranged for the following day prove a total failure. It has been claimed for Mr. Robert Walker, C.E., of Buckingham-street, that he has overcome the difficulties which have hitherto been encountered. It is said that his patent for a hydrocarbon furnace and apparatus "covers an arrangement by which common air is rapidly converted into hydro-carbon gas of great heating power, which is stored in a receiver, subjected to pressure, and thereby forced out through a pipe to the burners, from which combustion takes place (underneath but between the fire-bars) in the furnace," but this must be an error, as the conversion of common air into hydro-carbon gas is chemically and absolutely impossible, and the storing of a mixture of atmospheric air and hydro-carbon, available for fuel in such a manner as to ensure the necessary uniformity, is equally so. Under these circumstances it will suffice to state that on the surface bars Mr. Walker proposes to fix a layer of incombustible lumps of minerals, made up as a coal fire would be, but having the great difference—that, being indestructible by fire, it remains intact. When the hydro-carbon gas is lighted the flames rise in vivid combustion through the firing, and the furnace soon gets heated, and the air within becomes hot and rarefied. Then a series of tuyeres are started, and injected with air or steam, or both, and crude hydrocarbon in the form of fine spray into the already hot furnace. The force of the air blast rises the hydro-carbon spray some distance into the furnace, and discharges it finely pulverised and mixed up with air as impregnated hydro-carbon vapour over the red hot firing and blazing gas, and it is claimed that complete and effective combustion is ensured, and the flame passes along the flues as in the case of an ordinary fire, but without producing either smoke or sparks. Additional air may be admitted with the hydro-carbon spray if required through the air apertures (in the tuyeres), which may be opened or closed by a sliding outside collar, and which is adjustable by a lever arm. The usual claims of the advantages of a liquid fuel furnace are made on behalf of Mr. Walker, but these have been so frequently stated in the *Mining Journal* that it is unnecessary to repeat them. Petroleum as fuel appears to have been successfully used on the Billy Collins steamer in America, and when the system has had a trial sufficiently long to show its value, it will be further referred to.

Improvements in Valves.—An ingenious automatic valve has been invented by Mr. W. Green, C.E. of Berlin. The valve consists in the combination of a rotary hollow plug and a plate formed with studs or cam-like projections, with a chamber containing a piston, and having inlet and outlet passages, all of such relative dimensions that they may be opened and closed by hydraulic pressure. The opening of the outlet passage causes the piston to rise, and thereby the water to flow through the valve itself, and the communication from above the piston can be closed by either of two separate pieces, one of which is moved at will by hand, the other automatically by the action of the water, and so constructed that both together cannot remain open for a longer time than is designed by the constructor, whereby it is rendered impossible for water to flow through the valve for a longer period of time than is required by the piston to rise and fall once, the rise of the piston and opening of the valve being caused by the operator moving the plug, whilst the fall of the piston and consequent closing of the valve is caused by the action of the water on the internal mechanism of the valve, and is incapable of being controlled by the operator. The operation of the apparatus is very simple. Assuming the plate to be in its lowest position and the plug turned "open," water can then flow from the chamber above the piston through the plug and communication passage away into the outlet, thus taking off the pressure from the upper surface of the piston, which being forced upwards by the pressure of the water from the service pipe, rises in the chamber, at the same time opening the valve seat at the bottom and allowing water to flow through the chamber in a full current. The relative sections of the inlet and outlet, as well as of the chamber, are so arranged that the piston will continue to rise until it shall have carried up the plate to its seat under the cover, and have thus automatically closed the communication passage through the plug, which still remains turned to "open." As the water which continues to pass through or past the piston can no longer flow away above the same, but is pressing the plate tight up against its seat under the cover, the piston itself is in equilibrium and the pressure of the

water on the lower end of the same causes the valve to close gradually on to its seat and stop the flow of the water. In order to open the valve again the plug must be turned sufficiently for its cams to drive down the plate from its seat, thus opening the communication between the chamber and the plug, but this movement of the plug at the same time closes the communication between the plug and the outlet, so that the piston cannot rise and the valve will not open until the plug be turned further round or back again to "open," when the normal position will be resumed. The flow through the communication passages can be adjusted by screws or otherwise, thus regulating the velocity of rise and fall of the piston.

ELIMINATING PHOSPHORUS FROM PIG-IRON.—It is proposed by Mr. F. T. READE, of King's Bench Walk, Temple, that lime or limestone, either carboniferous or magnesian, be taken and ground as small as may be expedient in order to pass through the holes of the tuyeres, then that the ground lime or limestane be forced by means of force pumps or a screw propeller working in a hopper discharging or delivering into the blast pipe which supplies the Bessemer converter with air under pressure when converting pig-iron into steel by the Bessemer process, the ground lime or limestone being forced with the air through the molten pig-iron will eliminate the phosphorus, which will float as slag on the top of the molten iron or partly be blown out of the converter.

SEPARATION OF METALLIC SULPHIDES.—A soluble salt of manganese is according to the invention of Mr. P. PAULI, of the Reheinau Chemical Works, Baden, added to the alkaline solution to be treated and air is forced into the body of the liquid. When carrying the invention into effect the alkaline solution is conveyed into a suitable tank, into which air can be forced. A small quantity of manganese chloride or of any other suitable salt of manganese is added to the contents of the tank, and air is forced into the body of liquid through a perforated coil or through perforated pipes arranged at the bottom of the tank, or air is otherwise delivered into the liquid. The manganese salt takes up additional oxygen from the air which is forced into the liquid, and transfers this excess of oxygen to the metallic sulphide or sulphides. This action and reaction of the salt of manganese continues until the whole of the metallic sulphide or sulphides is or are oxidised, In the earlier stages of the process the liquid is rendered of a milky appearance by the presence of the protoxide of manganese, but when the separation or oxidisation of the sulphides is completed the liquid is of a black or blackish colour, and the process being then completed the treatment with air is discontinued. The precipitate is then allowed to settle, and the clear supernatant liquid is run off. A fresh charge of alkaline solution may then be run into the tank, and the treatment with air may be resumed without any further addition of the salt of manganese. A comparatively small proportion of the salt of manganese is required, and this may be used in the treatment of a number of charges of alkaline solution, so that the process is attended with great economy of materials When the manganese is considered to be too slow in its action the tank is entirely emptied, and for the next operation a quantity of fresh salt of manganese is added to the charge. The process is facilitated by heating the alkaline solution to a temperature of about 130°.

CRANSTONHILL ENGINE WORKS, GLASGOW.

ALEX. CHAPLIN AND CO.

THIS BUSINESS having been ACQUIRED by the SUBSCRIBER (practical partner of the late firm for the past ten years), will henceforth be CARRIED ON BY HIMSELF as SOLE PARTNER, under the same firm of ALEX. CHAPLIN AND CO.

Having arranged to retain the services of those who have managed the details of the business for a number of years, he hopes, from their and his practical experience and personal attention, to merit a continuance of the patronage so long accorded to the firm.

Mr. JOHN CLUGSTON, of 63, Queen Victoria-street, London, E.C., will act as agent for the firm there.

HENRY WILLIAM BALL,

Glasgow, 11th November, 1879.

THE DIRECTORS OF THE ENGLISH AND SCOTTISH BOILER INSURANCE COMPANY (LIMITED) are prepared to APPOINT AGENTS on liberal terms.

Apply to the Secretary, 100, King-street, Manchester; or 81, St. George's-place, Glasgow.

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VULCAN IRONWORKS,

MANCHESTER,

MANUFACTURERS OF IRON AND STEEL HOOPS FOR PACKERS, COOPERS, &c., &c.

RODS, PUDDLED BARS, &c.

WANTED.—A SMALL FACTORY, with STEAM POWER, WANTED on trial for three months, with the view to LEASE or PURCHASE. Must be near a railway station, and contain two or three steam hammers (about 2 tons each), two tilting hammers, a small rolling mill, and six or eight furnaces.

State terms by letter to Mr. WILLIAM ELLISON, Architect, 4, Queen Victoria-street, London, E.C.

COLLIERY SURVEYOR.

WANTED, a TRAINED QUALIFIED MINE SURVEYOR, able to make Theodolite Surveys.

Apply, stating reference and terms, to the NORTH BRANCEPETH COAL COMPANY (Limited), 7, Bondgate, Darlington.

WANTED, an ENERGETIC BUSINESS MAN to ACT as SECRETARY, and co-operate with the Owner to FORM COMPANIES for the WORKING of a TIN MINE and a COPPER MINE, adjoining the richest mines in CORNWALL, and on same veins. The copper mine has been opened only at the adit, which has laid open a course of ore for a great length. Small capital required to place them in a dividend-paying state. Inspection courted.

Apply to "Mining Engineer," 26, Fleet-street, London, E.C.

WANTED, a BAIRD'S COAL CUTTING MACHINE, NEW or SECOND-HAND. State price and particulars.

Address, "E. H.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED, a FIRST-CLASS 15 or 16-in. cylinder ENGINE, high pressure or condensing, SECOND-HAND. Must be well made, and fitted with expansion gear, and in good condition.

Particulars and price to JAMES D. THOMAS, 2, Coleman-street Buildings, Moorgate-street, London, E.C.

SPECIALLY RECOMMENDED TO INVESTORS.

EAST CREBOR SHARES have been largely bought during the week. It is the adjoining Mine to CREBOR, and possesses the IDENTICAL Lodes. Every discovery in Crebor enhances the value of East Crebor, which has already sold nearly £40,000 worth of rich copper ore, and in sinking the shaft a few fathoms the junction of Crebor Lode with the North Lode will be met with, and in all probability a great deposit of ore discovered. Shares are in great demand at 1¼ to 1⅜.

Plans (showing relative positions of Crebor and East Crebor) of J. SCOTT and Co., Palmerston Buildings, Old Broad-street, E.C.

TO CAPITALISTS, PROMOTERS, INVESTORS, &c.

A MINING ENGINEER of large experience in the WEST OF ENGLAND is in a position to obtain VALUABLE MINERAL GRANTS for clients on easy terms, and to INTRODUCE PROGRESSIVE PROPERTIES requiring very little additional expenditure to enable considerable returns to be made. With improved trade large profits are certain.

Address, "C.E., F.G.S.," MINING JOURNAL Office, 26, Fleet-street, London.

TO PARENTS AND GUARDIANS.

AN ELIGIBLE OPPORTUNITY is now offered for the SETTLEMENT of an ACTIVE YOUNG GENTLEMAN IN CANADA. He will be enabled to obtain his profession as a Solicitor in five, or if he be a Graduate in three years. Cost of living about £150. In the meantime he will have active work, and obtain a knowledge of the Dominion, which is destined to become one of the most prosperous of the Colonies. Premium, £100 sterling.

HERBERT C. JONES,

32, Wellington-street, Toronto. Canada Land and Loan Agency.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the CHARLOTTE UNITED MINES (LIMITED).—TO BE SOLD, under the direction of the Registrar of the said Court, on Monday, the 1st day of December next, at Eleven o'clock in the forenoon, at the CHARLOTTE UNITED MINES, in the parish of St. Agnes, within the said Stannaries, in One or more Lots, and subject to such conditions as shall be then and there stated and produced, the WHOLE of the

MINING PLANT, MACHINERY, MATERIALS, AND EFFECTS

Belonging to the said company, and being within and upon the said Mines, and comprising:—

ONE 36 in cylinder PUMPING ENGINE, with ONE BOILER, about 10 tons, steam pipes, and all complete; two balance bobs, with boxes and balance rod connections; 50 fms. of wire rope; 50 fms. of chain; 80 fms. of 2 in. flat rods, pins and connections; double power crab winch; 40 fms. iron stave ladders; 40 fms. of launders from engine-shaft.

ONE 22 in. WINDING and STAMPING ENGINE, 3 ft. 9 in. stroke, two fly wheels, 11 ft. diameter; axle for 16 heads; cams, lifters, with 8 ton BOILER, complete; capstan stand and stays; hand jack screw and one 3 in. drop screw; taps and plates; iron blocks; smiths' crane and chest; a quantity of new and old iron; wood houses and sheds; smiths' and miners' tools; bolts and burrs wheelbarrows; and other articles and effects in general use in Mines.

For further information, apply to the Official Liquidator of the said company, at the Stannaries Court Office, Truro; and for inspection of the said Machinery, &c., to the Bailiff in charge of the Mines.

HODGE, HOCKIN, AND MARRACK, Truro.
(Solicitors for the Official Liquidator.)

Dated Stannaries Court Office, Truro, 20th November, 1879.

ELIGIBLE INVESTMENT.

CALSTOCK, CORNWALL.

MESSRS. WARD AND CHOWEN WILL SELL, BY PUBLIC AUCTION, on Tuesday, the 25th day of November next, at Two o'clock P.M., the WHOLE of the PLANT, MINE MACHINERY, and MATERIALS, consisting of ONE 25 in. cylinder PUMPING ENGINE and TWO BOILERS; ONE 24 in. cylinder WINDING ENGINE, and ONE BOILER; 90 fathoms of pitwork; 12 heads of stamps; crusher; 30 ft. WATER-WHEEL, by 2½ breast; tram rails, wagons, winches, capstan, shears, whim, rope, and the usual mine requisites, together with the MINE SETT, known as the

PRINCE OF WALES MINE,

Situate in the parish of Calstock, Cornwall, which will be offered for sale at the Count House on the Mine as a going concern, in One Lot.

The mine is held under a lease granted by the Duchy of Cornwall for a term of twenty years, seven of which are unexpired, subject to an annual dead rent of £30, which merges into dues

A copy of the lease can be seen at the office of the auctioneers.

For viewing the same, apply to Captain ANDREWS, residing at Wheal Crebor, Tavistock; conditions of sale and further particulars, to the Auctioneers, at Burnville, Bridstowe, and Tavistock, Devon; and of ALEX. KERLY, Esq., Solicitor, 14, Great Winchester-street, London.—Dated 13th November, 1879.

LLANELLY, CARMARTHENSHIRE.

IMPORTANT SALE OF VALUABLE IRONWORKS.

MR. S. N. POWELL has received instructions TO SELL, BY AUCTION, at the Mackworth Arms Hotel, Swansea, on Wednesday, November 26th, 1879, at Two o'clock in the afternoon, the EXTENSIVE IRONWORKS known as the

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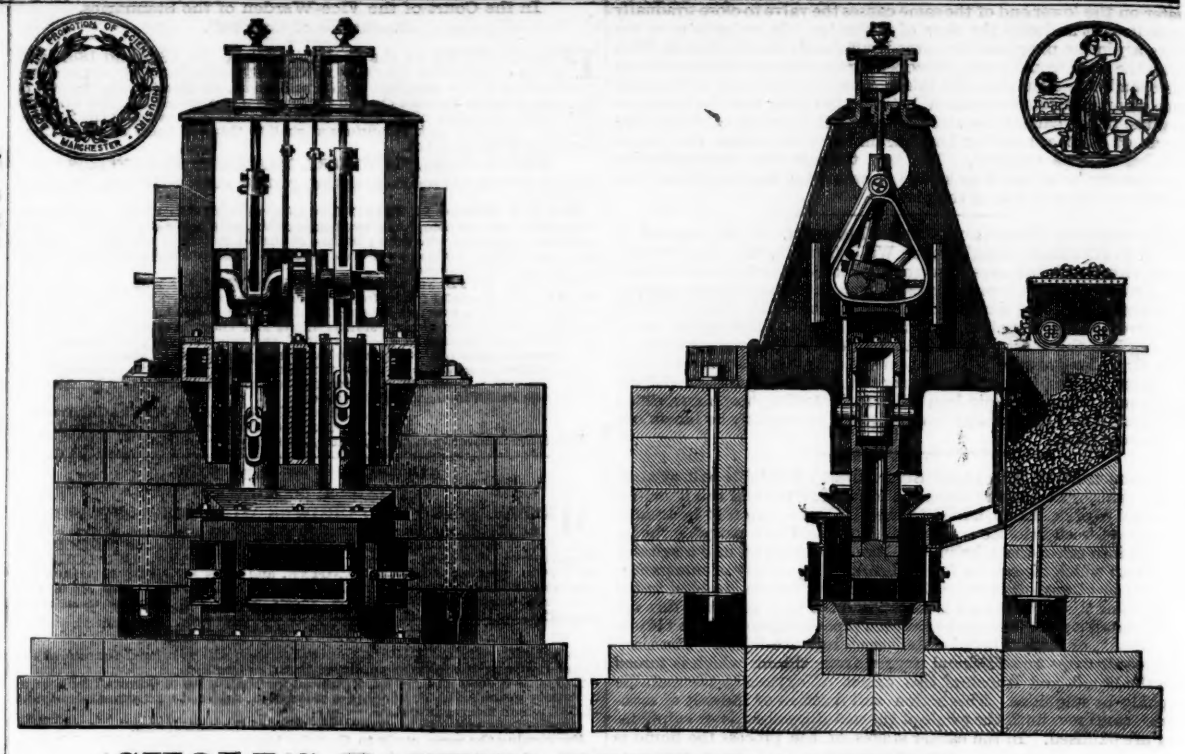

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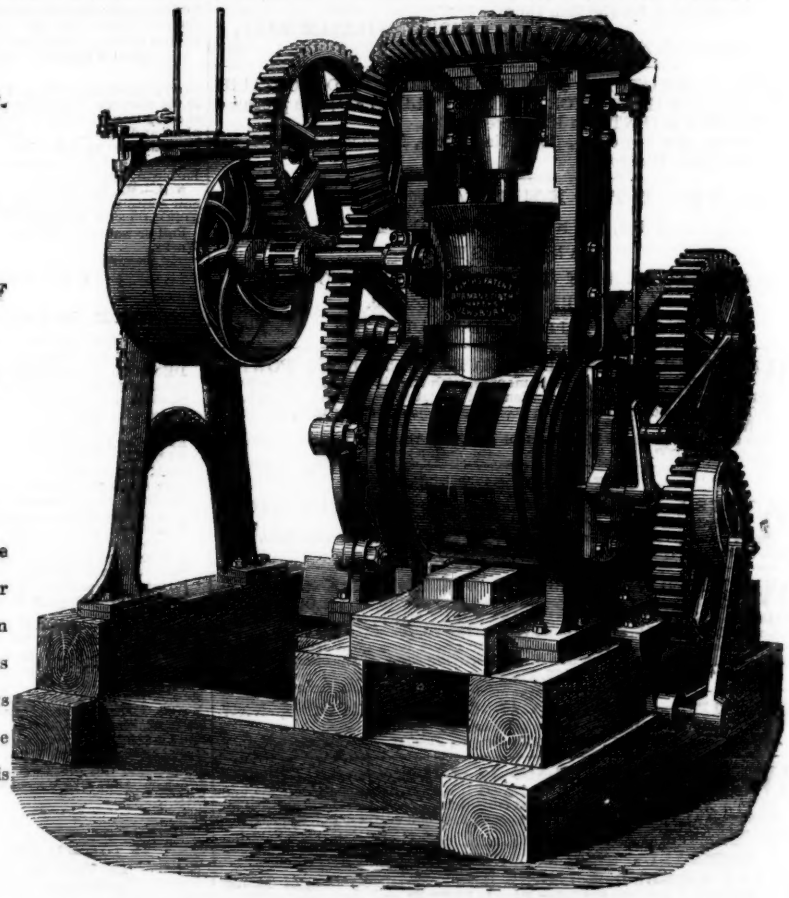

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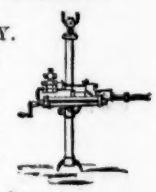

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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.		Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
10000	Caron, *l*, Cardigan*	2 0	0... 2½...	2 2½	... 0 4 0...	0 2	0...Oct. 1878
1000	Carn Brea, *c, t*, Illogan†§	56 7	6... 56 ...	52½ 55	...308 0 0...	1 0	0...Feb. 1874
10240	Devon Gt. Consols, *c, a*, Tavistock*†	1 0	0... 4¾...	4 4½	...116 15 0...	0 5	0...July 1877
4296	Dolcoath, *c, t*, Camborne	10 14	10... 56 ...	52½ 55	...114 1 3...	0 10	0...Oct. 1879
6400	East Pool, *t, c*, Illogan	0 9	9... 21 ...	19 21	... 16 15 3...	0 9	0...Oct. 1879
40000	Glasg. Car., *c** [30000sh. £1 pd., 10000 15s. pd.]	⅞...	⅛ ⅞	... 0 13 10...	0 0	6...Aug 1878	
8500	Gorsedd and Merlin Con., *l*, Flint.	2 10	0... 2½...	1½ 2½	... 0 5 0...	0 5	0...Aug. 1877
15000	Great Laxey, *l*, Isle of Man*	4 0	0... 19 ...	18 19	... 25 0 0...	0 5	0...Oct. 1879
6400	Green Hurth, *l*, Durham*	0 6	0... 5 ...	5 ...	... 2 5 0...	0 3	0...Aug. 1879
20000	Grogwinion, *l*, Cardigan*	2 0	0... 4 ...	3½ 4	... 0 14 10...	0 1	10...Aug. 1878
2800	Isle of Man, *l*, Isle of Man*†	25 0	0... — ...	...	... 82 5 0...	0 10	0...Feb. 1879
20000	Leadhills,* *l*, Lanarkshire	6 0	0... 4 ...	3¼ 4	... 0 15 0...	0 3	0...Mar. 1878
400	Lisburne,* *l*, Cardiganshire	18 15	0... 35 ...	30 35	...597 10 0...	1 0	0...Mar. 1878
10000	Mellanear Copper, Hayle*	2 0	0... 4¾...	4 4½	... 0 12 0...	0 2	0...Nov. 1879
9000	Minera Mining Co., *l*, Wrexham*	5 0	0... 13 ...	11 13	... 68 5 2...	0 2	0...Nov. 1879
20000	Mining Co. of Ireland, *ci, c, l**	7 0	0... — ...	...	... 23 17 6...	0 2	6...Jan. 1878
888	North Busy, *t, c*, Chacewater	1 14	0... 5 ...	4½ 5	... 1 0 0...	0 5	0...Oct. 1878
11829	North Hendre, *l*, Wales	2 10	0... — ...	7 7¼	... 3 2 6...	0 5	0...Sept. 1879
8063	Ditto	1 0	0... — ...	2⅞ 3	... 0 4 0...	0 2	0...Sept. 1879
10000	Pant-y-Mwyn, *l*, Mold (8794 sh. iss)	2 0	0... — ...	...	... 0 3 0...	0 2	0...Aug. 1878
6000	Pennant, *l, bar*, North Wales*	5 0	0... 5 ...	4 5	... 0 10 0...	0 5	0...Mar. 1878
18000	Prince Patrick,* *s-l*, Holywell	1 0	0... — ...	...	... 0 15 0...	0 0	6...July 1879
12000	Ditto, pref. (8000 sh. issued)	0 10	0... — ...	...	... 0 1 6...	0 0	6...July 1879
10000	Red Rock,* *l*, Cardigan	2 0	0... 1¼...	1¼ 1¾	... 0 4 0...	0 2	0...Jan. 1878
12000	Roman Gravels, *l*, Salop*	7 10	0... 11½...	11 11½	... 8 5 0...	0 5	0...May 1879
512	South Caradon, *c*, St. Cleer	1 5	0... 55 ...	50 55	...744 10 0...	1 0	0...Nov. 1878
6123	South Condurrow, *t, c*, Camborne†...	6 5	6... 14½...	13 14	... 5 17 0...	0 10	0...Aug. 1879
4500	South Wheal Frances, *t*, Illogan†	7 12	4... 11¾...	11 11½	... 38 14 6...	0 10	0...Aug. 1879
12000	Tankerville, *l*, Salop*	6 0	0... 5¾...	5 5½	... 4 17 6...	0 5	0...Jan. 1877
6000	Tincroft, *c, t*, Pool, Illogan†§	11 10	0... 16½...	15 16	... 50 8 6...	0 5	0...May 1877
15000	Van, *l*, Llanidloes*	4 5	0... 22½ ..	21 22	... 24 0 6...	0 5	0...July 1879
3000	West Chiverton, *l*, Perranzabuloe†§	17 5	0... 5 ...	3¼ 4¼	... 55 10 0...	0 10	0...Feb. 1878
512	West Tolgus, *c*, Redruth	95 10	0... 27½...	26 28	... 33 0 0...	1 0	0...Jan. 1879
600	West Wheal Seton, *c*, Camborne†§...	51 0	0... 50 ...	47½ 50	...448 0 0...	0 15	0...Apr. 1878
1024	Wheal Eliza Consols, *t*, St. Austell..	18 0	0... — ...	...	... 27 10 0...	2 0	0...Oct. 1879
3000	Wheal Peevor, *t*, Redruth	7 11	0... 16 ...	16 17	... 2 8 6...	0 16	0...Oct. 1879

FOREIGN DIVIDEND MINES.

35500	Alamillos, *l*, Spain*†	2 0	0... 2 ...	1½ 2	... 1 19 9...	0 0	6...Oct. 1878
30000	Almada and Tirito Consol., *s**†	1 0	0... 7/16...	5/16 7/16	... 0 6 3...	0 1	0...May 1876
20000	Australian, *c*, South Australia†	7 7	6... 2 ...	1½ 2	... 1 3 6...	0 2	0...Aug. 1879
20000	Cape Copper Mining,*† South Africa	7 0	0... 32 ...	31 33	... 35 17 6...	0 10	0...Sept. 1879
35000	Cesena Sulph. Co., Romagna, Italy*	10 0	0... — ...	...	... 0 19 0...	0 1	0...Aug. 1879
10000	Copiapo, *c*, Chili* (£20 shares)	16 15	0... — ...	...	... 7 11 5...	0 3	0...May 1877
23500	Eberhardt and Aurora, *s*, Nevada*†	10 0	0... 3½...	3¼ 3¾	... 1 8 0...	0 3	0...Dec. 1877
10000	English and Australian,† *c*, S. Aust.	2 10	0... 1¾...	1½ 1¾	... 2 17 9...	0 1	0...Mar. 1879
25000	Fortuna, *l*, Spain*†	2 0	0... 5¼...	4¾ 5¼	... 7 6 5...	0 1	6...Sept. 1879
55000	Frontino & Bolivia, *g*, New Gran.*†	2 0	0... 2¾...	2½ 2⅞	... 0 3 6...	0 1	0...Feb. 1879
15000	Linares, *l*, Spain*†	3 0	0... 5¼...	4¾ 5¼	... 17 14 10...	0 2	0...Sept. 1879
10000	Pontgibaud, *s-l*, France†	20 0	0... 21 ...	18 20	... 27 6 9...	0 7	6...June 1879
100000	Port Phillip, *g*, Clunes*†(£2 shares)	1 0	0... ⅝...	⅜ ⅝	... 1 12 0...	0 1	0...Mar. 1879
54000	Richmond Consol., *s*, Nevada*†	5 0	0...9½xd..	8¾ 9¼xd...	7 16 6...	0 7	6...Nov. 1879
40000	Santa Barbara,* *g*, Brazil	0 10	0... 2¼...	2 2¼ ...	0 8 9...	0 1	6...Nov. 1879
120000	Scottish-Australian Mining Co.*†	1 0	0... 2¾...	2 2¼ ...	15 p. cent.		...May 1879
80000	Ditto, New	0 10	0... 1¼...	⅞ 1⅛ ...	15 p. cent.		...May 1879
22500	Sierra Buttes, *g*, California*†	2 0	0... 2 ...	1⅝ 1⅞ ...	2 0 6...	0 1	6...Apr. 1879
40625	Ditto, Plumas Eureka	2 0	0... 3 ...	2¾ 3 ...	2 7 0...	0 3	0...Oct. 1879
£253000	St. John del Rey*† (£5 Stock and multiples dealt in)...			270 280	...12½ p.c. for half-year, June 1879		
25000	Victoria* (London), *g*, Australia ...	1 0	0... ½...	⅜ ½	... 0 13 1½ 0	0	7½June 1879
2100	W. Prussian (5500 pref. sh. £10 pd.)	10 0	0... 10½...	10 10½ ...	1 14 0...	0 0	4 0...Oct. 1879

§ Have made calls since last dividend was paid.

NON-DIVIDEND BRITISH MINES.

Shares.		Paid.	Last wk.	Clos pr.
2560	Aberllyn,* *l, bl*, Carnarvon	10 0	0... 11 ...	10 11
12000	Assheton, *l*, Carnarvonshire*	5 0	0... ⅝...	½ ⅝
11583	Bedford Unit.,* *c*, Tavis [£1 liab.)...	0 4	0... ¾...	½ ¾
30000	Bettws-y-Coed,* *l* (20000 sh. issued)	1 0	0... 1⅛...	1 1⅛
8000	Blaen Caelan,* *l*, Cardigan	3 0	0... — ...	
3939	Blue Hills, *t, c*, St. Agnes	4 6	6... ¾...	½ ¾
30000	Bodidris,* *l, bl*, Denbighshire	1 0	0... 1⅜...1⅝	1⅝
200	Botallack, *t, c*, St. Just†	126 5	0...100 ...	80 100
10000	British, *s-l*, Wrexham	2 0	0... 2 ...	1½ 2
256	Browngelly, *c*, St. Neot	0 10	0... 1¼...	1 1¼
20000	Bwlch United,* *l* (£1 sh.) Cardigan	0 12	6... 1¾...	3 3⅛
50000	Cambrian,* *s-l, c*, Cardiganshire	2 0	0... 2¼...	2 2¼
20000	Cen. Foxdale, *l*, I. of Man* (£2 sh.)	1 5	0... — ...	
5120	Clementina, *l*, Llanrwst*	1 0	0... 1¼...	1 1¼
25000	Coed Mawr Pool,* *l*, Carnarvon	2 0	0... — ...	
7500	Combellack,* *t*, Wendron	2 0	0... — ...	
8000	Combmartin, *s-l*, North Devon	0 8	6... ⅜...	⅛ ⅜
2450	Cook's Kitchen, *t*, Illogan†§	27 4	9... 7 ...	3 3½
10000	Cornw. Great Cons , *t, c*, Callington.	4 0	0... 5½...	5 5½
6400	Crook Burn,* *l*, Cumberland	0 5	0... ¼...	¼
14000	Crosswood Mining Lands, *l**	1 0	0... 2 ...	1 1½
15000	Cwm Brwyno,* *l*, Cardigan	2 0	0... 2¼...	2 2¼
15000	Cwm Dwyfor,* *c, s-l*, Wales	1 0	0... — ...	
1280	D'Eresby Consols, *l, bl*, Carnarvon..	10 0	0... 6 ...	4 6
1024	D'Eresby Mountain, *l, bl*, Llanrwst.	20 0	0... 35 ...	30 35
20000	Denbighshire Consolidated,* *l*	3 0	0... 3 ...	2 3
12000	Derwent,* *l*, Durham	4 0	0... 1¾...1¼	1¾
10000	Dubby Syke, *l*, Durham*	0 15	0... 6s....	6s.
5000	East Black Craig,* *l*, Scotland†	5 0	0... — ...	
6144	East Caradon, *c*, St. Cleer†	3 4	6... 3¼...	2¾ 3
1000	East Chiverton, *l*, Perranzabuloe	9 10	3... 2¼...1¾	2¼
3000	East Craven Moor,* *l*, Pateley Bdg.	10 0	0... 9 ...	8 9
12000	East Crebor, *c*, Tavistock	0 1	0... 1½...	1 1¼
300	East Darren,* *l*, Cardiganshire†	32 0	0... — ...	
30000	East Florida,* *s-l*, Cardiganshire	1 0	0... 1½...1¼	1½
6000	East Goginan, *l*, Cardigan	2 0	0... — ...	
10000	East Longstone,* *s-l*, Lezant	1 0	0... 1½...	1 1⅛
21000	East Roman Gravels,* *l*, Salop	0 10	0... ⅞...	¾ ⅞
9000	Ditto, 6 per cent. pref. (fully pd.).	1 0	0... — ...	
18000	East Van, *l*, Llanidloes*	5 0	0... 3 ...2¼	2¼
1114	East Wheal Lovell, *t*, Helston	10 8	6... 2¾...2¼	2¼
6000	Florence,* *s-l, bl*, St. Ive	5 0	0... 5 ...	5
12500	Frongoch, *l*, Cardgn (11000 sh. iss.)	2 0	0... 3½...	3¼ 3¾
3950	Gawton, *c*, Tavistock	4 9	6... ¼...	⅛ ¼
14000	Glenroy,* *s-l*, Isle of Man	4 5	0... ⅝...	½ ¾
20000	Goreu,* *s-l*, Carmarthen	1 0	0... — ...	
20000	Great Dylife,* *s-l*, Montgomery	1 0	0... 1½...	1 1½
20000	Gt. E. Foxdale, *l*, I. of Man (£1 sh.)	0 18	0... — ...	
12000	Great Holway,* *l*, Flintshire	5 0	0... 5 ...	4½ 5
6000	Great Wh. Eleanor, *t*, North Bovey	1 17	6... ⅜...	¼ 3/8
20000	Griffin, *s-l*, Carnarvon	1 0	0... 1¼...	1 1¼
9880	Gunnislake (Clitters), *t, c*†	5 5	0... 1½...1¼	1½
10000	Gwern-y-Mynydd,* *s-l*, Flintshire..	5 0	0... 5 ...	4½ 5
10000	Harehope Gill,* *l*, Durham (£1 sh.)	0 5	0... — ...	
1200	Hartington Moor,* *carb. l*, Derby...	1 1	0... 2 ...	1½ 2
6400	Harwood,* *l*, Durham	0 15	0...1s. 6d...	1s. 6d.
3000	Herodsfoot, *l*, near Liskeard†	1 0	0... 2½...2¼	2½
8000	Hingston Down, *c*, Calstock*†	0 7	0... ½...	½ ⅝
6000	Killifreth, *t*, Chacewater	2 12	6... 3/16...	⅛ 3/16
12000	Ladywell,* *l*, Salop	2 10	0... 1 ...	¾ 1
12000	Ditto, 10 per cent. pref., £1 each.	0 10	0... ⅜...	⅜ ⅝
5000	Lead Era,* *l*, Mold	2 10	0... 3½...2⅞	3⅛
2500	Levant, *c, t*, St. Just	10 14	6... — ...	
6000	Livingstone Consols, *t*, St. Agnes...	0 10	0... ½...	½
15000	Llandegla,* *l*, Llanarmon	1 0	0... 1¼...	1 1¼
6000	Llansawel,* *l*, Wales	5 0	0... 6½...	6 6½
10000	Lomax, *s-l*, Perranzabuloe	1 0	0... — ...	
5120	Lovell, *t*, Wendron	0 16	0... 1¼...	1 1¼
30000	Llanrwst,* *l*, Carnarvon	2 0	0... 1¾...1¼	1½
7500	Ditto, 10 per cent. pref.	2 0	0... 2¾...2¼	2⅜
9000	Marke Valley, *c*, Linkinhorne†	5 3	6... 1½...1¼	1¾
1800	Mawston,* *l*, South Wales	1 0	0... 2 ...	1½ 2
6000	Medlyn Moor, *t*, Wendron	3 15	10... — ...	
11900	Melyndwr, *l*, Cardigan*	3 0	0... — ...	
8000	Mineral Corporation of Gt. Britain*	10 0	0... 13 ...	12 13
11000	Monydd Gorddu, *l*, Cardigan* (Red)	5 0	0... 2 ...	1½ 2
12000	Morfa Du, *z, g, s*, Anglesea*	1 0	0... ⅞...	¾ ⅞
25000	Nant-y-Ronen, *s-l*, Cardigan*	1 0	0... — ...	
4678	New Bronfloyd,* *l*, Cardig. (£5 sh.)	3 16	0... — ...	
12000	New Cathedral,* *c, t*, Gwennap	1 0	0... 1¾...	1 1¼
3000	New Cwmystwith,* *l*, Cardigan	5 0	0... — ...	
8000	New Dolcoath, *t, c*, Camborne*	3 0	0... 1¼...1½	1¾
3500	New Tincroft,* *t*, Lelant	6 0	0... — ...	

NON-DIVIDEND MINES—*continued.*

Shares.		Paid.	Last wk.	Clos pr.
10000	N. D'Eresby Mount.,* *l, bl*, Carnarv.	1 0	0... 1⅛...	1 1⅛
2000	North Levant, *t, c*, St. Just†	13 6	0... 5 ...	3 5
50000	North Molton, *c, ms, s*, Devon	1 0	0... 1 ...	1
6000	North Penstruthal,* *t, c*, Gwennap†	0 10	0... 1 ...	1 1¼
2936	North Treskerby, *c*, St. Agnes	8 17	10... — ...	
12000	Pandora,* *l*, Carnarvon	0 4	0... ¾...	½ ¾
6000	Park Valley,* *s-l*, North Devon	0 4	0... ¾...	⅛ ¼
6000	Parracombe, *s-l*, Devon	0 5	0... — ...	
45000	Parys Corporation,* *c*, Anglesea	1 0	0... 15/16...	15/16 15/16
7500	Pateley Bridge, *l*, Yorkshire	1 0	0... ¾...	⅜ ¾
15000	Ditto (also 7500 sh. not issued)	0 17	0... — ...	
12000	Pen-yr-Orsedd,* *l*, Flintshire	1 0	0... 1¼...	1 1½
5000	Penhalls, *t*, St. Agnes†	3 17	6... ¾...	1½ 2
15000	Perran Consols, *s-l*, Perranzabuloe..	1 0	0... — ...	
12000	Phœnix, & W. Phœnix, *t, c*, Link.§.	5 10	3... — ...	
7000	Picton,* *s-l*, Holywell, fully paid	1 0	0... ½...	¾ ½
6000	Plympton Mining and Arsenic*	1 0	0... 3½...3¼	3½
12000	Plynlimmon, *l*, Llanidloes*	2 0	0... 6s....	4s. 6s.
10000	Port Nigel,* *s-l*, Carnarvonshire	2 0	0... ½...	¼ ½
2000	Prideaux Wood, *t*, Llanivery	5 0	0... — ...	
5182	Prince of Wales, *c*, Calstock†	2 8	0... — ...	
5000	Rhydalun,* *l*, Mold	10 0	0... — ...	
15000	Rookhope, *l*, Durham	1 10	0... ¾...	⅛ ¼
50000	So. Cambrian,* *l*, Cardiganshire	1 0	0... 1¾...1½	1¾
6000	South Cwmystwith, *l*, Cardigan	2 0	0... ⅜...	⅛ ⅜
9000	South Darren, *l*, Cardigan*	1 10	0... 3 ...	2¾ 3
30000	South de Eresby Mountain, *l*	1 0	0... 1⅞...1⅝	1⅞
512	South Dolcoath, *c, t*, Redruth	12 5	0... — ...	
18000	South Roman Gravels, *l**	1 10	0... 3s. ...	1s. 3s.
6000	South Roskear, *t, c*, Camborne	8 5	0... — ...	
6000	South Tolcarne, *t, c*, Camborne	2 8	0... ¾...	½ ¾
40000	South Wheal Crebor*, *c*, Tavistock..	1 0	0... 1⅜...1¼	1⅜
2043	South Wheal Crofty, *c*, Illogan	15 17	0... 7½...	7 7½
6000	St. Lawrence, Amal., *l*, Flintshire*.	2 0	0... — ...	
10000	St. Patrick, *l*, Halkin, Holywell*	1 0	0... 1 ...	¾ 1
30000	Talybont,* *s-l*, Cardiganshire	1 0	0... — ...	
40000	Tamar, *s-l*, Bearalston*	1 0	0... 1¾...1½	1¾
6400	Teesdale,* *l*, Durham (pref.)	1 0	0... 8s....	8s.
10000	Temple, *l*, Cardigan*	1 0	0... — ...	
5000	Treleigh Wood, *t*, Redruth	6 1	0... — ...	
12000	Tretheilan, *s-l*, Cranstock*	2 0	0... — ...	
640	Truro,* *l*, Nerquis, Flintshire	10 0	0... — ...	
5000	Tyn-y-Fron,* *l*, Cardigan	1 0	0... 1⅛...	1 1⅛
5000	Ditto	0 7	6... ½...	⅜ ½
10000	Van Cons. and Glyn,* *l*, Llanidloes.	2 0	0... ⅛...	¼ ⅛
1000	Vaughan,* *l*, Cardiganshire	10 0	0... — ...	
18000	Victor,* *l*, Flintshire (£1 share)	0 5	0... — ...	
12000	West Assheton, *l*, Carnarvon	1 0	0... 2⅛...	2 2¼
6000	West Basset, *c*, Illogan†	7 0	4... 11½...11	11¼
5500	West Combmartin, *s-l*, No. Devon..	1 0	0... — ...	
7000	Ditto	0 2	6... — ...	
3000	W. Craven Moor, *l*, Pateley Bridge*	10 0	0... 8 ...	7 8
12000	West Goginan,* Cardiganshire	2 0	0... ¾...	⅛ ¼
12000	West Holway, *l*, Flintshire	1 0	0... 1½...	1 1½
6000	West Kitty, *t*, St. Agnes	0 2	0... — ...	
3000	West Mary Ann, *l*, Menheniot	0 12	6... — ...	
199	Westminster Bog Issa, Llanarmon..	5 0	0... — ...	
20000	West Pateley Bridge,* *l*, Yorkshire.	1 0	0... 2¾...2¼	2¾
1783	West Poldice, St. Day†	11 0	0... — ...	
1000	Wt. Roskear, *t, s-l, bl, c*, Camborne.	5 10	0... — ...	
2048	West Wheal Frances, *t*, Illogan†	29 6	3... 12 ...	11 12
3000	West Wheal Peevor, *t*, Redruth	1 5	0... 5 ...	4½ 5
12000	West Wye Valley,* *l*, Montgomery.	3 0	0... 1 ...	¾ 1¼
6000	Wheal Agar, *c*, Illogan†	12 10	0... 6 ...	5½ 6
6144	Wheal Basset, *c*, Illogan†	33 2	6... 3½...	3 3¼
6000	Wheal Coates, *t*, St. Agnes	2 0	0... — ...	
2585	W. Comford, & No. Tres., *c*, Gwennap	1 17	0... 3 ...	2½ 3
6000	Wheal Crebor, *c*, Tavistock	4 8	0... 6 ...	6½ 7
5179	Wheal Grenville, *c*, Camborne	4 10	0... 5¼...	5 5½
2048	Wheal Jane, *t*, Kea†	5 13	10... 5⅝...	5 5½
4295	Wheal Kitty, *t*, St. Agnes†	5 4	6... 3 ...	2¾ 3
80	Wheal Owles, *t*, St. Just†	178 15	0...105 ...	95 105
12000	Wheal Russell, *c*, Tavistock	2 1	6... — ...	
1000	Wheal Sisters, *t*, Lelant	16 10	0... 16 ...	15 16
4096	Wheal Uny, *t, c*, Redruth	15 1	0... 1¾...1½	1¾
2324	White Cliff,* *l*, Llanrwst	5 0	0... — ...	
10000	Wye Valley, *l*, Montgomery*	3 0	0... 1 ...	¾ 1¼

bl, blende; *sl*, coal; *s*, copper; *g*, gold; *l*, lead; *s*, silver; *sl*, slate; *s-l*, silver-lead; *t*, tin; *z*, zinc; *i*, iron; *a*, arsenic.
* Limited Liability Companies; † quoted on the Stock Exchange; ‡ have paid dividends.

NON-DIVIDEND FOREIGN MINES; FOREIGN AND MISCELLANEOUS STOCKS; TRAMWAYS; INSURANCE COMPANIES; GAS, IRON AND COAL, WAGON COMPANIES, &c.

NON-DIVIDEND FOREIGN MINES.

Shares.		Paid.	Clos. pr.
15000	Birdseye Creek, *g*, California*	4 0	0...
80000	Blue Tent, *hyd*, California	5 0	0... 1½ 2
10000	Buena Ventura,* *l*, Spain (£2 sh.).	0 15	0...
15000	Canada, *g*, Canada	1 0	0...1½ 1¾
34433	Cedar Creek, *g*, California*	5 0	0...
15000	Chicago, *s*, Utah*	10 0	0...
49935	Chontales, *g, s*, Nicaragua*†	2 0	0... ¼ ⅜
75000	Colombian Hydraulic, *g*, Colombia	1 0	0...
65000	Colorado United, *s-l* Colorado*†‡..	5 0	0...1⅝ 1⅞
100000	Don Pedro North del Rey* †.....	1 0	0... ⅝ ¾
20000	English Australian, *g*, Victoria* ...	1 0	0...
100000	Exchequer, *g, s*, California*†	1 0	0... ¾ ⅜
100000	Frontenac,* *l*, Ontario, Canada ...	1 0	0...
10000	Hornachos,* *s-l*, Spain	10 0	0... 11 12
12000	Hultafall,* *l, bl*, Orebro, Sweden .	5 0	0... 1½ 2
12000	Hunter Consolidated, *s-l*, Utah ...	10 0	0...
7500	Isabelle, *g, s*,* California (£20 sh.).	5 0	0...
100000	I.X.L., *g, s*, California*	1 0	0...
50000	Javali, *g*, Nicaragua*	2 0	0... ⅜ ½
20000	Last Chance,* *s*, Utah	5 0	0... ¼ ½
65000	London and California, *g*†‡	2 0	0... ½ ¾
7587	Lusitanian, Portugal*† (£5 sh.) ...	4 15	0...
9000	Missouri, *l*, pref (fully paid)...	10 0	0...10 10½
40000	Nava de Jadraque,* *g, s*, Spain.....	1 0	0...
66000	New Quebrada, *c*, Venezuela.....	5 0	0...3½ 3⅜
100000	Nouv. Monde, *g*, Venez. (en com.)	1 0	0... ¾ 1
3000	Oregon, *g*, Oregon, U.S. (pref. sh.)	4 0	0...
50000	Panulcillo, *c*, Chili*† (£80000 Deb.)	4 0	0...4¾ 4¾
80000	Pestarena United, *g*, Italy*†	3 0	0... ¼ ½
25000	Pitanqui,* *g*, Brazil (in. 6000 £1 pd)	0 8	6...
26000	Placerville, *g, q*, California	2 0	0...2½ 2¾
40000	Ravenscliff, *g*, N. Zlnd; *c*, S. Aust.	0 5	0...
1898320	Rio Tinto,* *c*, Huelva, Spain	Stock	... 81 83
44950	Ditto 7 p. c. Mort. Bonds...	20 0	0...19¼ 19¾
225000	Ditto shares	10 0	0... 6 6½
100000	Rossa Grande, *g*, Brazil*† (£1 sh.).	1 0	0...
25300	Ruby and Dunderberg, *g*, Nevada*	10 0	0...3¼ 3½
200	Ditto (10 per cent. deb. conv.)...	50 0	0...
32000	Sentein,* *s.i, bl*, Ariège, France ...	1 0	0...
10000	Silver Piume, *s*, Colorado	1 0	0...
20000	Tolima,* *g, s*, Colombia	5 0	0...
43174	United Mexican,*†‡ *s*, Mexico	29 2	6... 2½ 3
50000	Virneberg, *c*, Rheinbreitb., Ger.*..	2 0	0...
15000	Western Andes, *s*, Colombia	5 0	0...
75000	Yorke Peninsula, *c*, So. Australia...	1 0	0...3/16 5/16
54800	Yorke Pen., *c*, South Aust. Pref....	1 0	0... ¾ 1

GAS COMPANIES.

Issue.	Shares.		Pd.	Clos. pr.
5000...	20...	Bahia [L]	all...	13½ 14½xd
40000...	5 ...	Bombay [L].....	all...	6¼ 6¾
10000...	5 ...	Ditto, New [L]	4...	⅛ 1 pm
29700...	Stk ...	Brentford Consolidated	100...	148 153
14000...	20...	British	all...	34 36
850000...	Stk ...	Commercial.....	100...	181 183
20000...	20...	Continental Union [L]	all...	18¼ 19¼
20000...	20...	Do. do. New, 1869, 1872 ...	14...	2 1 dis
10000...	20...	Do. do. 7 per ct. Preference	all...	23½ 24½
23406...	10...	European [L]	all...	17½ 18½
4094850	Stk ...	Gaslight and Coke, A, Ord. ...	100...	180 182
50000...	10...	Ditto, 4th issue	all...	17 18
50000...	10...	Ditto, 5th issue	all...	16 17
284200...	Stk ...	Do, 4 per cent. Deb. Stock...	100...	99 101
5000...	10...	Hong Kong and China	all...	14½ 15½ xd
2800000	Stk ...	Imperial Continental	100...	193 195
386500...	Stk ...	London	100...	173 175
12000...	5 ...	Malta & Mediterranean [L] ...	all...	2 2½
100000...		...Metrop. of Melbourne 6 p.c. Deb. ...		102 104
25000...	20 ...	Monte Video [L]	all...	14½ 15½
10000...	5 ...	Ottoman [L]	all...	2 2¼
30000...	5 ...	Oriental [L].....	all...	6¼ 7¼
27000...	20...	Phœnix.....	all...	36½ 37
200000...	Stk ...	Do., New Max. div. 7½ p.ct.	80...	110 114
37500...	20...	Rio de Janeiro [L]	all...	26¾ 27¼
500000...	Stk ...	South Metropolitan	100...	195 198
15000...	10...	Surrey Consumers	all...	18½ 19½

INSURANCE COMPANIES.

Issue.	Shares.		Pd.	Clos. pr.
50000	100	Alliance British and Foreign ...	11 ...	28 29
10000	100	Ditto, Marine	20 ...	27½ 28¾
100000	10	Anglo-French Fire [L]	2 ...	
50000	30	British and Foreign Marine [L].	4 ...	13 13½pm
50000	50	Commercial Union	5 ...	14¾ 15¼pm
50000	50	Eagle	5 ...	5½ 6
25000	20	Globe Marine [L]	11 ...	2½ 1⅛ dis
7500	100	Imperial Life	10 ...	21 23
13453	100	Indemnity Marine	50 ...	96 98
49626		L'pool & Lond. Globe (£1 annty)		...15½ 15¾pm
35862	25	London	12½...	59 61pm
40000	25	London and Lancashire Fire....	2½...	3 3½ pm
50000	20	London and Provincial Marine...	2 ...	2½ 2¾ pm
10000	100	Marine	18 ...	82 84
50000	10	Merchants' Marine	2 ...	1¾ 1¾ dis
50000	10	Maritime	2 ...	5½ 5¾
40000	50	North British Mercantile	8¾...